SERVICE MANUAL

LP300



LCD PC

LCD Computer

LP300

Service Manual

Notice

Version 1.0
March 2002

Trademarks

About this Manual

This manual is intended for service personnel who have completed sufficient training to undertake the maintenance and inspection of personal computers.

It is organized to allow you to look up basic information for servicing and/or upgrading components of the LCD PC. The following information is included:

Chapter 1, Introduction, provides general information about the location of system elements and their specifications.
Chapter 2, Disassembly, provides step-by-step instructions for disassembling parts and subsystems.
Appendix A, Part Lists
Appendix B, Schematic Diagrams
Appendix C, Switches
Appendix D, Updating the FLASH ROM BIOS

Related Documents

You may also need to consult the following manual for additional information:

<u>User's Manual on CD</u>
This describes the LCD PC's features and the procedures for operating the computer and its ROM-based setup program. It also describes the installation and operation of the utility programs provided with the LCD PC.

Contents

Disassembly 2-1

Part Lists A-1

Schematic Diagrams B-1

1: Introduction

Overview

This manual covers the information you need to service or upgrade the LP300 LCD computer. Information about operating the computer (e.g. getting started, and the *Setup* utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in *User's Manual*. That manual is shipped with the computer.

Operating systems (e.g. *DOS*, *Windows 9x*, *Windows NT 4.0*, *Windows 2000*, *Windows XP*, *OS/2 Warp*, *UNIX*, etc.) have their own manuals as do application software (e.g. word processing and database programs). If you have questions about those programs, you should consult those manuals.

The LP300 LCD computer is designed to be upgradeable. See **"Disassembly" on page 2 - 1** for a detailed description of the upgrade procedures for each specific component. Please note the warning and safety information indicated by the "" symbol.

The balance of this chapter reviews the computer's technical specifications and features.

System Specifications

Processor

- Intel® Pentium® 4 (400MHz System Bus) - 1.4 ~ 2.0+GHz
- Supporting mPGA478 Processor Package

Core Logic

- Intel® 850
  MCH = 82850
  ICH-2 = 82801BA

Structure

- Fully PC 2001 Compliant
- ACPI 2.0 Compliant

Security

- BIOS password

Memory

- Two DIMM sockets supporting PC800 RDRAM
- DRAM upgradeable to 1GB (128/256/512MB RDRAM modules)

BIOS

- 2MB Flash ROM Phoenix BIOS
- Supports Plug and Play, ACPI 2.0

LCD

- 17”/18.1" SXGA 1280 * 1024 LCD Panel

Memory Module Warning

There **must** be a memory module present in **both** DIMM sockets to make sure the computer will boot up. The memory modules must be the same size and specification. The options are listed in the table below.

Display

- ATI M6-P Integrated AGP™ 4X
- Integrated 128-bit 2D/3D Graphics Accelerator
  Advanced HW Acceleration for DVD Playback (Motion Compensation engine and IDCT)
  Fully DirectX 8 Compliant Graphics Engine
- External memory of 32MB or 64MB of DDR SGRAM on board (factory option)
- Dual-View Display Monitor

Storage

- One 3.5” 1.44MB 3-mode FDD (slim type)
- One 3.5” HDD
- Two slim storage bays for CD Devices
  Device Bay Right: Changeable with CD-ROM/CD-RW/DVD/Combo drive
  Device Bay Left: Changeable with CD-ROM/CD-RW/DVD/Dummy or RF module

Audio

- AC97’ 2.2 compatible
- Two Built-In speakers (3W)
- Three audio jacks for headphone-out, line-in, and microphone-in

PC Card Sockets

- Supports two Type II or one Type III PCMCIA slots
- Integrated IEEE 1394a controller

Interface

- One parallel port
- One D-sub 15-pin CRT port compliant DC1.1
- Four USB ports
- One IEEE 1394 port
- One RJ-45 jack for 100M/10M Ethernet LAN
- One RJ-11 port for Modem
- One Video-in for TV-tuner (Optional TV-tuner)
- One S-Video connector
- One SPDIF out port

Communication

- 802.11b Wireless LAN (Optional)
- One RJ-11 port for Modem
- One RJ-45 port for 10/100Mbps Ethernet

Power Management

- ACPI v1.0 Compliant

Power

- Internal switching power supply
- Full range AC adapter - AC in 90~264V, 160W

Indicators

- LED indicators (HDD/FDD activity, status indicators)

Environmental Spec

- Temperature — Relative Humidity
- Operating: 5°C ~ 35°C — Operating: 20% ~ 80%
- Non-Operating: -10°C ~ 60°C — Non-Operating: 10% ~ 90%

Physical Dimensions

- 460mm (H) * 448 mm (W) * 220mm (D)

Weight

- 13.9Kg w/o Bay 2 device installed

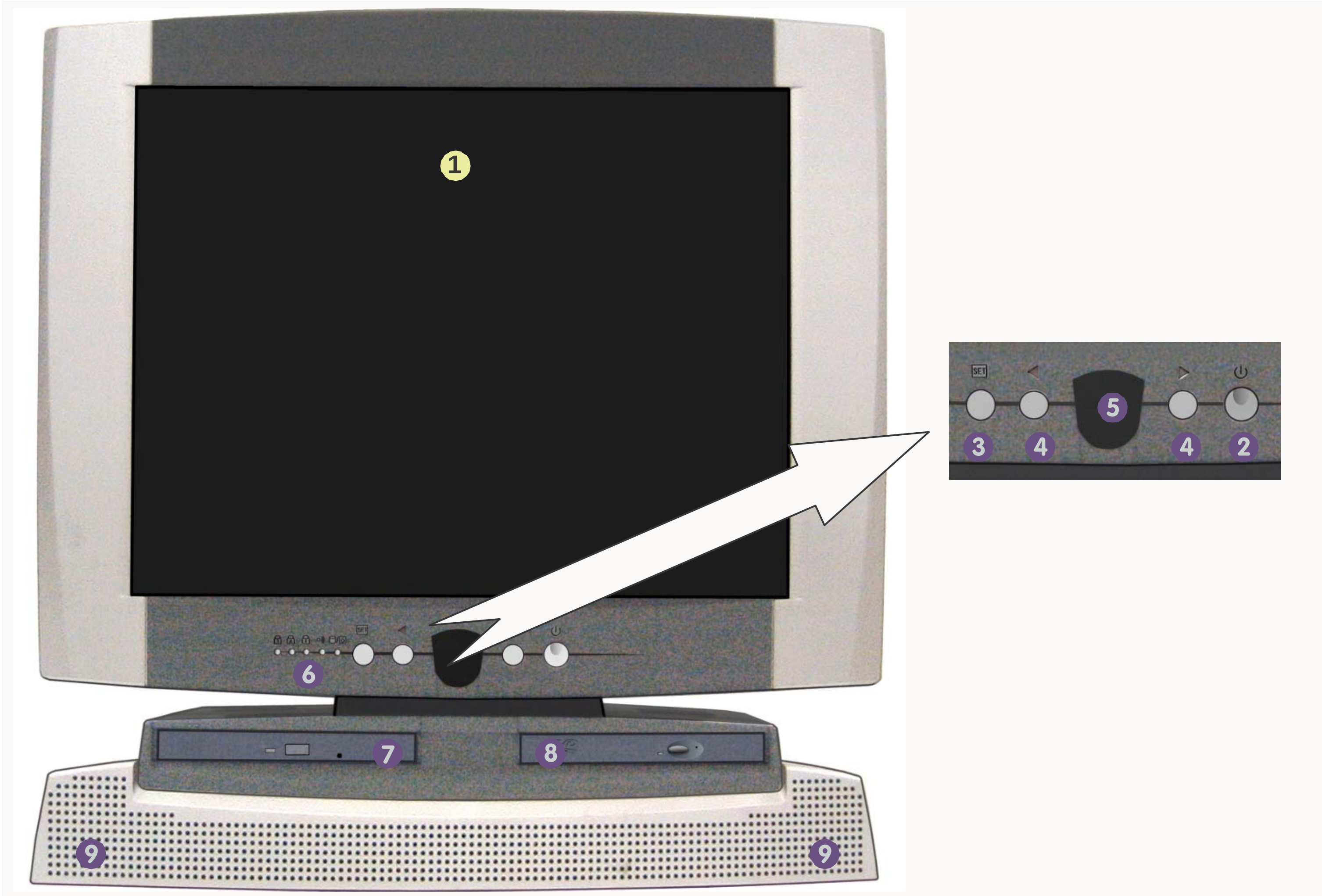
Optional

- IR Keyboard
- Wireless LAN Module
- RF Module for wireless Keyboard / Mouse

External Locator - Top View

Figure 1 - 1
Top View

1. LCD Panel
2. Power Button
3. Set Button
4. Scroll Buttons
5. Infrared Receiver
6. LED Status Indicators
7. Device Bay Left (for CD/CD-RW/ DVD device/RF module or Dummy Bay)
8. Device Bay Right (for CD/CD-RW/ DVD/Combo drive)
9. Speakers



External Locator - Left & Right Side Views



Figure 1 - 2
Left & Right Views

1. Floppy Disk Drive
2. Hard Disk Drive Bay
3. AC Power-In
4. Dual USB Ports
5. Kensington Lock Slot
6. Headphone-Out Jack
7. Line-In Jack
8. Microphone-In Jack
9. Volume Control Knob
10. PC Card Eject Buttons
11. Dual PC Card Slots

External Locator - Right Side & Bottom Views

Figure 1 - 3
Right Side

1. Video-In Port
2. S/PDIF Out Port
3. RJ-11 Phone Jack
4. RJ-45 LAN Jack
5. Dual USB Ports
6. Unpowered - IEEE 1394 Port
7. Printer/Parallel Port
8. External Monitor (CRT) Port
9. S-Video Connector
10. Vents



Mainboard Overview - Top

Key Parts

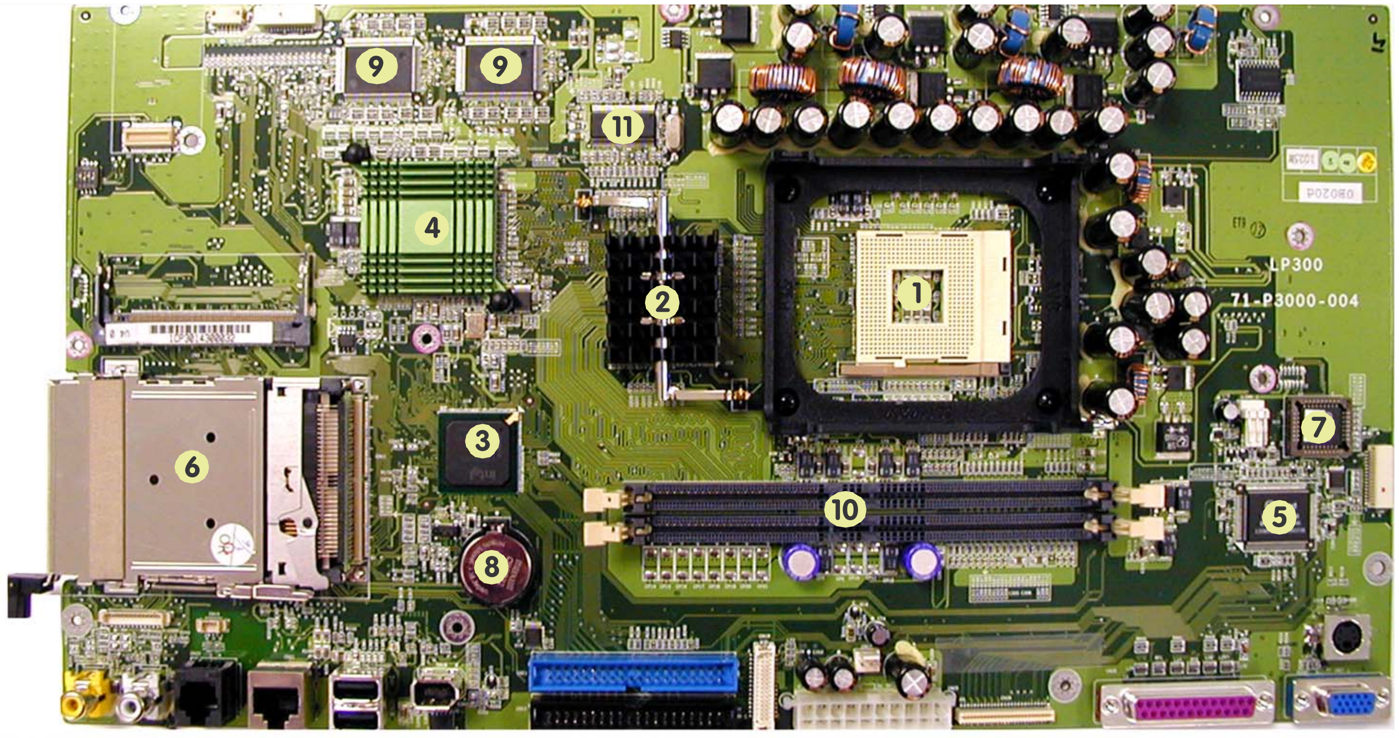


Figure 1 - 4
Mainboard Overview - Top Key Parts

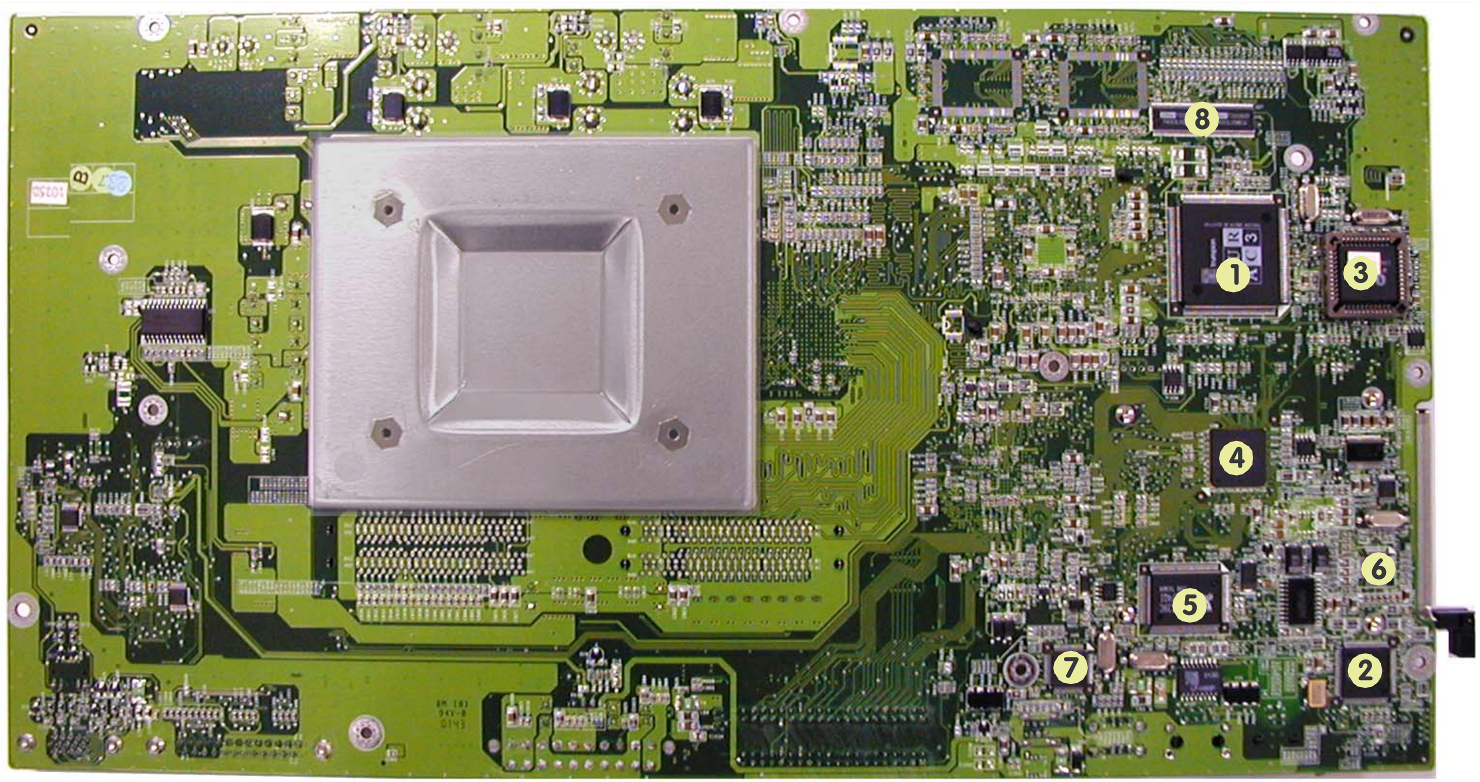
1. CPU Socket (no CPU Installed)
2. Northbridge Intel MCH 82850 615 OLGA
3. Southbridge Intel ICH-2 82801 BA 360 EBGA
4. VGA - ATI Mobility M6-P
5. W83627HF-AM Super I/O Controller
6. PCMCIA
7. W49V002FAP Firmware Hub
8. CMOS Battery
9. On-Board Video Memory
10. 2 * DIMM Sockets
11. Clock Generator

Mainboard Overview - Bottom

Key Parts

Figure 1 - 5
Mainboard Overview - Bottom Key Parts

1. AC97 MDC Module
2. SAA7114 A/D (Analog to Digital)
3. Micro-P (OSD) W78E62BP
4. 1394a Integrated Cardbus Controller
5. RTL8139C LAN Controller
6. ALC201 - AC 97 Audio Codec
7. TSB41AB1 - 1394 PHY
8. TH63LVDM83A - LVDS



Mainboard Overview - Top

Cable Connectors and Switches

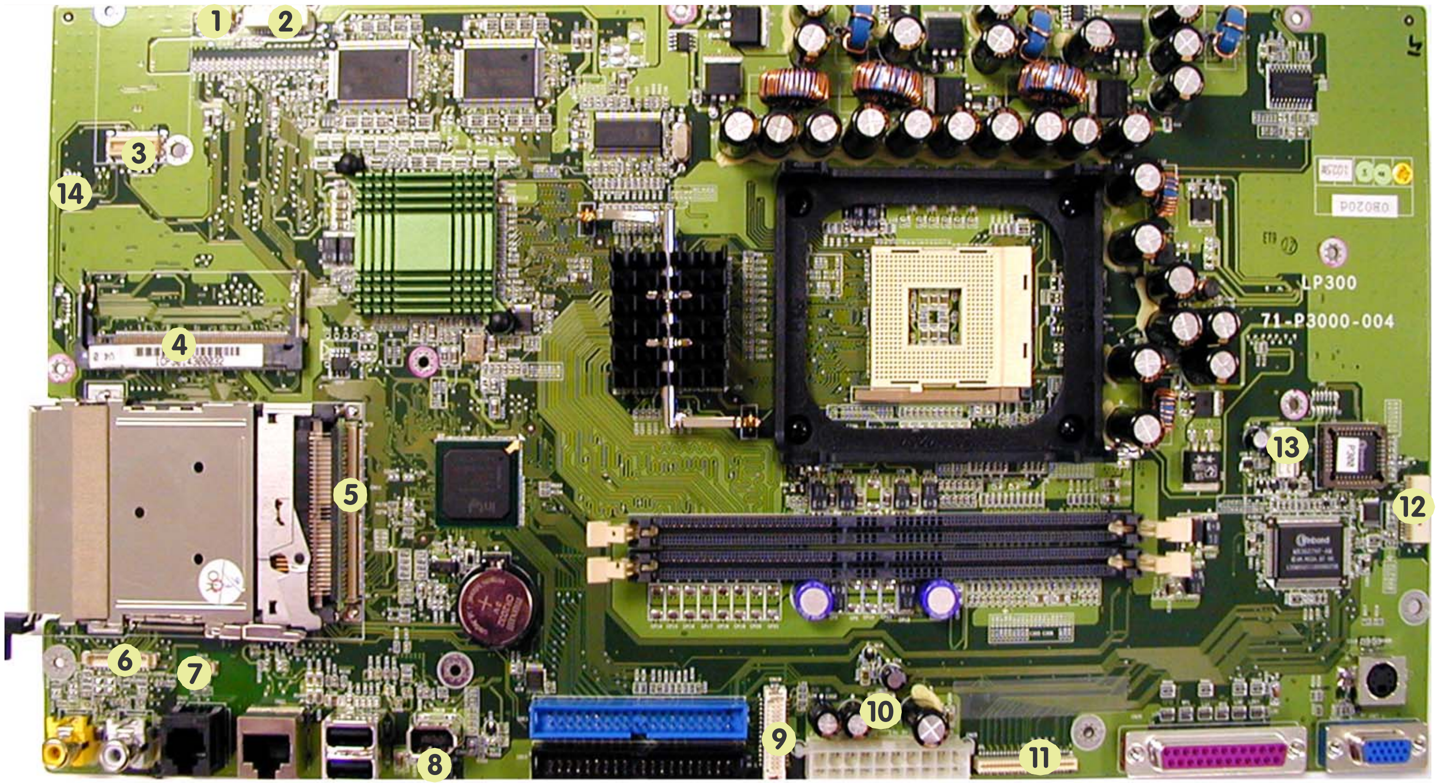


Figure 1 - 6
Mainboard Top Cable Connectors & Switches

1. CN1(12V LCD Cable)
2. CN2 (3V or 5V LCD Cable)
3. CN3 (Modem Module)
4. CN5 (Wireless Lan Module)
5. CN11 (PCMCIA Module)
6. CN14 (Audio Cable)
7. CN15 (Modem Cable)
8. CN29 (Inverter Board)
9. CN19 (Bridge Board Cable)
10. CN17 (System Fan Cable)
11. CN28 (FDD Cable)
12. CN29 (LED Board)
13. CN8 (CPU Fan Cable)
14. SW1 (DIP Switch - “Settings” on page C - 2)

2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

We suggest you completely review any procedure before you take the computer apart.

Procedures such as upgrading/replacing the RAM, CD device and hard disk are included in the User’s Manual but are repeated here for your convenience.

To make the disassembly process easier each section may have a box in the page margin. Information contained under the figure # will give a synopsis of the sequence of procedures involved in the disassembly procedure. A box with a ✎ lists the relevant parts you will have after the disassembly process is complete. **Note**: The parts listed will be for the disassembly procedure listed ONLY, and not any previous disassembly step(s) required. Refer to the part list for the previous disassembly procedure. The amount of screws you should be left with will be listed here also.

A box with a ☑ will provide any possible helpful information. A box with a 🔔 contains warnings.

Examples of these types of boxes are shown in the sidebar.

✎ Component Parts

☑ Information

🔔 Warning

NOTE: ALL DISASSEMBLY PROCEDURES ASSUME THAT THE SYSTEM IS TURNED **OFF**, DISCONNECTED FROM ANY POWER SUPPLY, AND THAT ALLL PERIPHERAL CABLES ARE DISCONNECTED (INCLUDING TELEPHONE LINES AND NETWORK CABLES).

Maintenance Tools

The following tools are recommended when working on the notebook PC:

- M3 Philips-head screwdriver
- M2.5 Philips-head screwdriver (magnetized)*
- M2 Philips-head screwdriver
- Small flat-head screwdriver
- Pair of needle-nose pliers
- Anti-static wrist-strap

Connections

Connections within the computer are one of four types:

Locking collar sockets for ribbon connectors	To release these connectors, use a small flat-head screwdriver to gently pry the locking collar away from its base. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Pressure sockets for multi-wire connectors	To release this connector type, grasp it at its head and gently rock it from side to side as you pull it out. Do not pull on the wires themselves. When replacing the connection, do not try to force it. The socket only fits one way.
Pressure sockets for ribbon connectors	To release these connectors, use a small pair of needle-nose pliers to gently lift the connector away from its socket. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Board-to-board or multi-pin sockets	To separate the boards, gently rock them from side to side as you pull them apart. If the connection is very tight, use a small flat-head screwdriver - use just enough force to start.

Maintenance Precautions

The following precautions are a reminder. To avoid personal injury or damage to the computer while performing a removal and/or replacement job, take the following precautions:

1. **Don't drop it**. Perform your repairs and/or upgrades on a stable surface. If the computer falls, the case and other components could be damaged.
2. **Don't overheat it**. Note the proximity of any heating elements. Keep the computer out of direct sunlight.
3. **Avoid interference**. Note the proximity of any high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage components and/or data. You should also monitor the position of magnetized tools (i.e. screwdrivers).
4. **Keep it dry**. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.
5. **Be careful with power**. Avoid accidental shocks, discharges or explosions.
   - Before removing or servicing any part from the computer, turn the computer off and detach any power supplies.
   - When you want to unplug the power cord or any cable/wire, be sure to disconnect it by the plug head. Do not pull on the wire.
6. **Peripherals** – Turn off and detach any peripherals.
7. **Beware of static discharge**. ICs, such as the CPU and main support chips, are vulnerable to static electricity. Before handling any part in the computer, discharge any static electricity inside the computer. When handling a printed circuit board, do not use gloves or other materials which allow static electricity buildup. We suggest that you use an anti-static wrist strap instead.
8. **Beware of corrosion**. As you perform your job, avoid touching any connector leads. Even the cleanest hands produce oils which can attract corrosive elements.
9. **Keep your work environment clean**. Tobacco smoke, dust or other air-born particulate matter is often attracted to charged surfaces, reducing performance.
10. **Keep track of the components**. When removing or replacing any part, be careful not to leave small parts, such as screws, loose inside the computer.

Cleaning

Do not apply cleaner directly to the computer, use a soft clean cloth.
Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Disassembly Steps

The following lists the disassembly steps, and on which page to find the related information. **PLEASE PERFORM THE DISASSEMBLY STEPS IN THE ORDER INDICATED.**

Memory Module Warning

There **must** be a memory module present in **both** DIMM sockets to make sure the computer will boot up. The memory modules must be the same size and specification. The options are listed in the table below.

To remove the hard disk drive assembly:

To remove the CD device(s):

To remove the RF module:

To remove the system memory:

To remove the CPU:

To remove the modem:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Remove the LCD shielding plate	page 2 - 16
5.Remove the modem	page 2 - 19

To remove the floppy disk drive assembly:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Remove the LCD shielding plate	page 2 - 16
5.Remove the FDD	page 2 - 20

To remove the optional wireless LAN module:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Remove the LCD shielding plate	page 2 - 16
5.Remove the Wireless LAN module	page 2 - 21

To remove the inverter board:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Remove the LCD shielding plate	page 2 - 16
5.Remove the inverter board	page 2 - 23

To remove the mainboard:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Remove the LCD shielding plate	page 2 - 16
5.Remove the system memory	page 2 - 13
6.Remove the CPU	page 2 - 17
7.Remove the modem	page 2 - 19
8.Remove the optional wireless LAN module	page 2 - 21
9.Remove the I/O bracket	page 2 - 22
10.Remove the rear bracket	page 2 - 22
11.Remove the inverter board	page 2 - 23
12.Remove the mainboard	page 2 - 24

To remove the LCD/LED board:

To remove the base cover:

To remove the speaker units:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Separate the bottom case from the LCD etc.	page 2 - 25
5.Remove the base cover	page 2 - 28
6.Remove the speaker units	page 2 - 29

To remove the bridge board:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Separate the bottom case from the LCD etc.	page 2 - 25
5.Remove the base cover	page 2 - 28
6.Remove the speaker units	page 2 - 29
7.Remove the bridge board	page 2 - 29

To remove the CD device base brackets:

1.Remove the LCD hinge cover	page 2 - 14
2.Remove the IDE shielding plate	page 2 - 14
3.Remove the LCD back cover	page 2 - 15
4.Separate the bottom case from the LCD etc.	page 2 - 25
5.Remove the base cover	page 2 - 28
6.Remove the speaker units	page 2 - 29
7.Remove the bridge board	page 2 - 29
8.Remove the CD device base brackets	page 2 - 30

To remove the USB board:

1.Remove the LCD hinge cover page 2 - 14
2.Remove the IDE shielding plate page 2 - 14
3.Remove the LCD back cover page 2 - 15
4.Separate the bottom case from the LCD etc. page 2 - 25
5.Remove the base cover page 2 - 28
6.Remove the speaker units page 2 - 29
7.Remove the bridge board page 2 - 29
8.Remove the CD device base brackets page 2 - 30
9.Remove the USB board page 2 - 30

To remove the power supply unit:

1.Remove the LCD hinge cover page 2 - 14
2.Remove the IDE shielding plate page 2 - 14
3.Remove the LCD back cover page 2 - 15
5.Separate the bottom case from the LCD etc. page 2 - 25
6.Remove the base cover page 2 - 28
7.Remove the speaker units page 2 - 29
8.Remove the bridge board page 2 - 29
9.Remove the CD device base brackets page 2 - 30
10.Remove the power supply unit page 2 - 31

Figure 2 - 1
Hard Disk Removal Sequence

a. Remove the screw from the HDD Bay.
b. Pull the HDD assembly out.
c. Disconnect the IDE and power cables.
d. Remove the screws from the assembly and slide the hard disk out of the case.

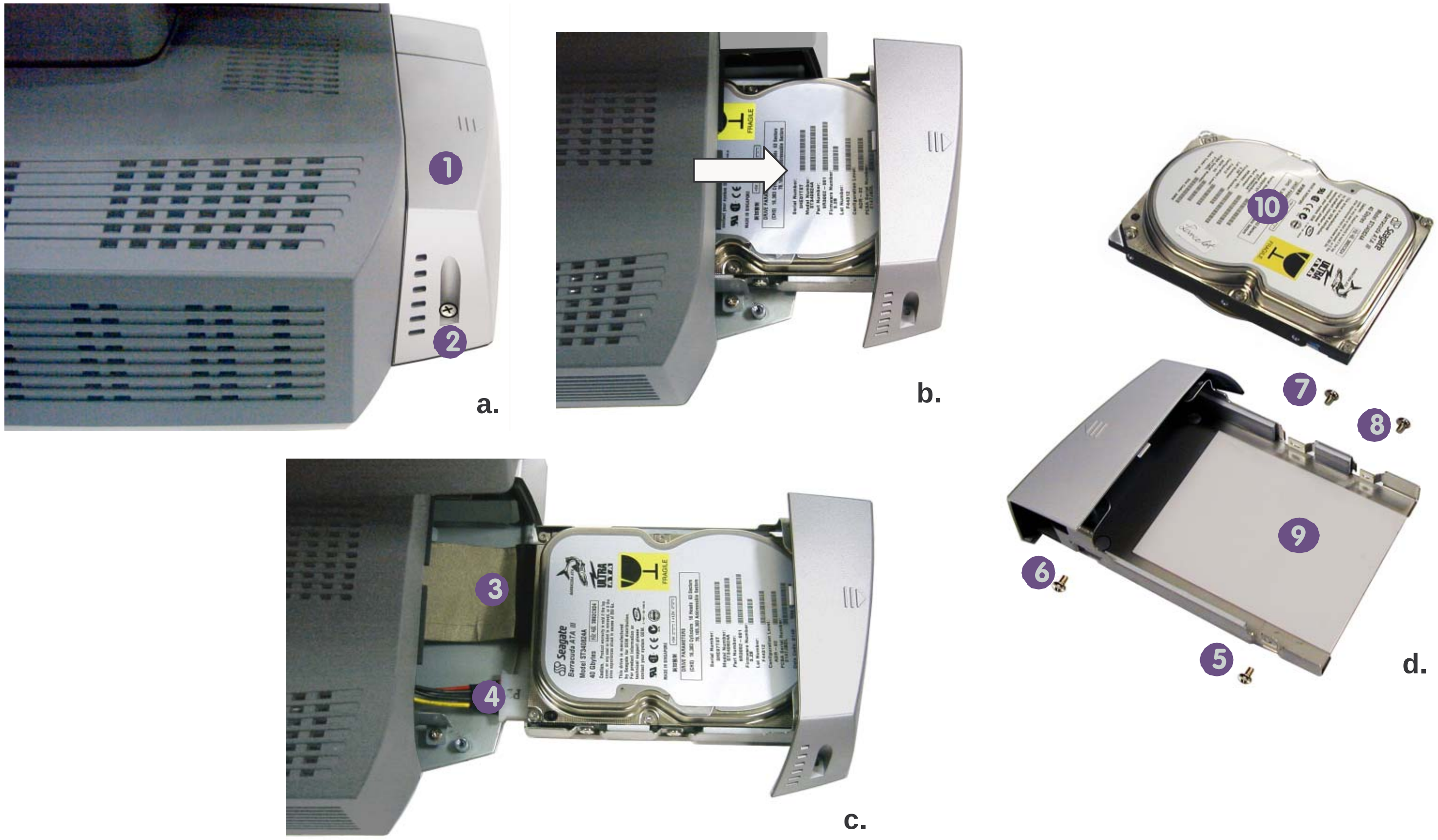
9. HDD case
10. HDD

- 5 Screws

Removing the Hard Disk Drive Assembly

1. Turn **off** the computer and turn it around so that you may comfortably access the left side..
2. Remove screw "**2**" from the HDD Bay "**1**" (**Figure 2 - 1a**).
3. Carefully pull the HDD Assembly out from the bay (**Figure 2 - 1b**) and disconnect the IDE cable "**3**", and power cable "**4**" (**Figure 2 - 1c**).
4. Remove screws "**5** "- "**8**" from the assembly, and slide the hard disk "**9**" out of the case "**10**".

.



Removing the CD Devices

1. Turn **off** the computer and pull the LCD up and forward to allow easier access to the latches “**1**” & “**2**”.
2. Slide the latches to unlock the drives and hold in place as you pull the drive out of the bay (the left bay latch slides to the right. the right bay to the right).
3. Pull the CD-device(s) "**3**" out of the bay(s).

Figure 2 - 2
CD Device Removal Sequence

a. Slide the latch and hold in place.
b. Pull the drive out of the bay.

a.



b.



a.



b.



3. CD device(s)

Figure 2 - 3
RF Module Removal Sequence

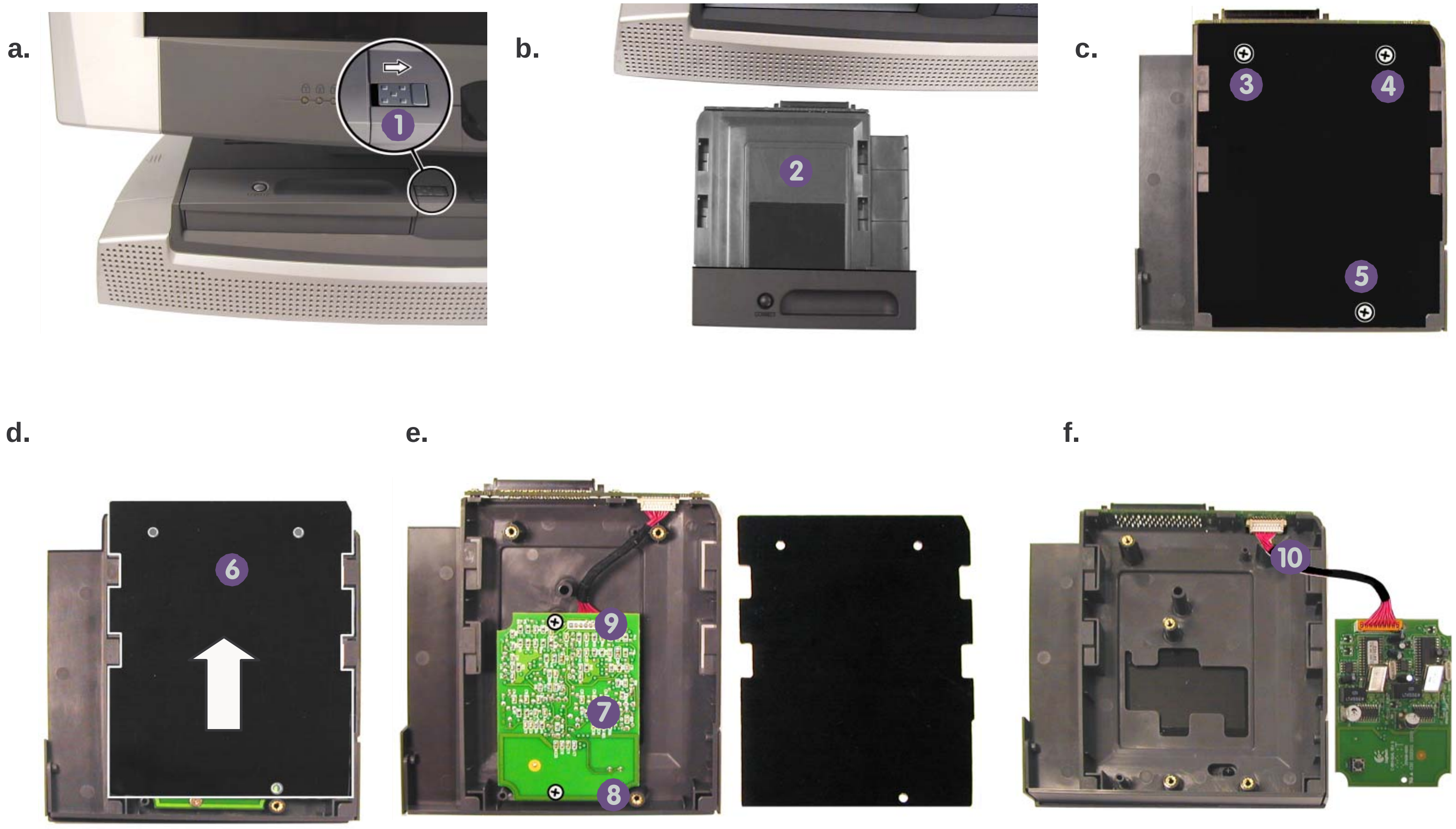
a. Slide the latch and hold in place.
b. Pull the module case out of the bay.
c. Remove the three screws from the case cover.
d. Remove the case cover.
e. If there is an RF module in the case remove the screws.
f. Remove the cable. and RF module.

2. RF module case
7. Optional RF module

- 5 screws (if module is included)

Removing the RF Module

1. Turn **off** the computer and pull the LCD up and forward to allow easier access to the latch "**1**".
2. Slide the latch to unlock the module case and hold in place as you pull the case out of the bay (the left bay latch slides to the right).
3. Pull the RF module "**2**" case out of the bay.
4. Turn the case over and remove screws "**3**" - "**5**", then remove the case cover "**6**".
5. If there is an RF module "**7**" into the case, remove screws at positions "**8**" and "**9**" and disconnect cable "**10**".



Removing the System Memory

The computer can accommodate up to 1GB of memory in two DIMM sockets. It supports 128/256/512MB modules of PC800 RDRAM specification.

Socket 1	Socket 2	Total RAM
128MB	128MB	256MB
256MB	256MB	512MB
512MB	512MB	1024MB

Memory Module Warning

There **must** be a memory module present in **both** DIMM sockets to make sure the computer will boot up. The memory modules must be the same size and specification. The options are listed in the table below.

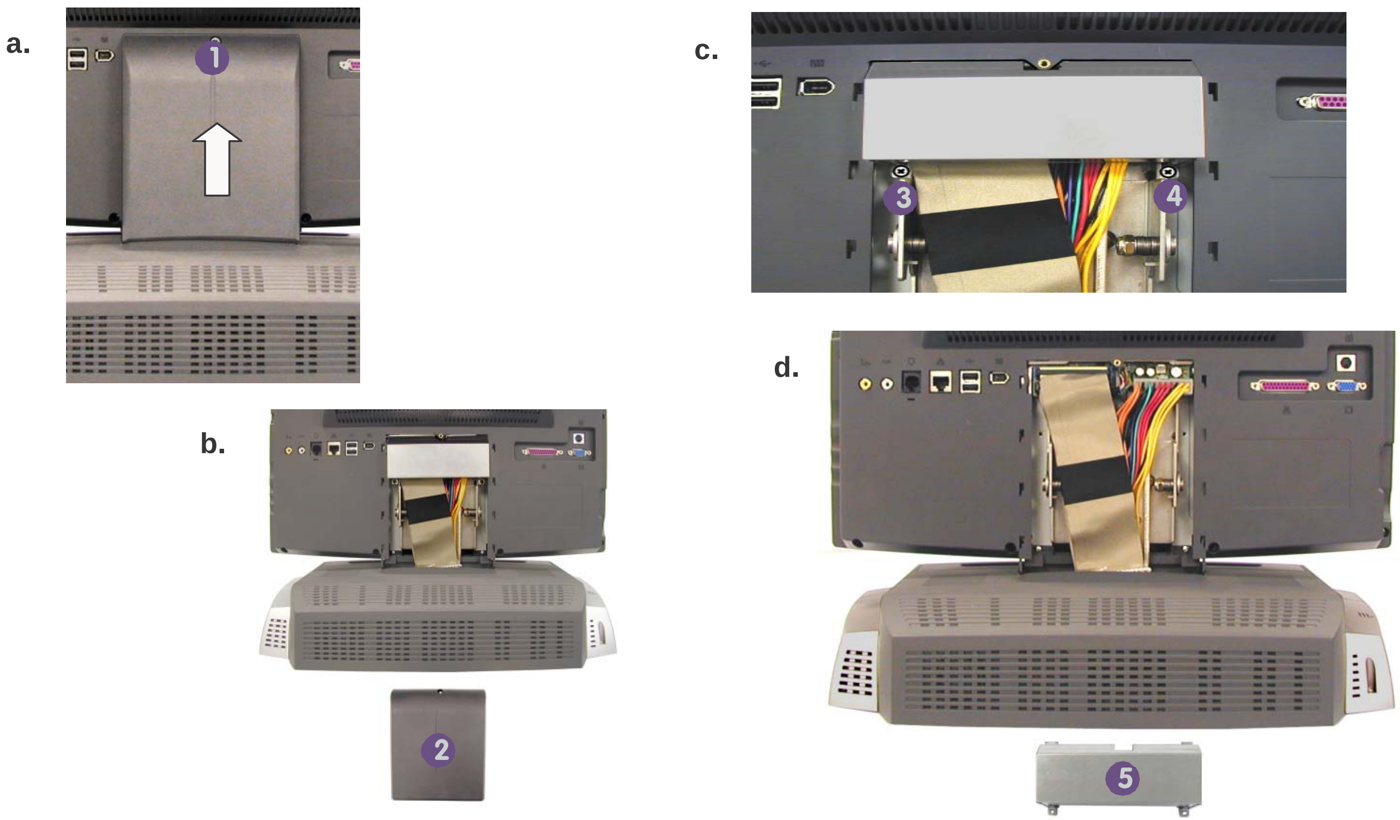
Table 2 - 1
RAM Options

Figure 2 - 4
Memory Removal Sequence

a. Remove the screw from the LCD hinge cover.
b. Slide off the LCD hinge cover.
c. Remove the IDE shielding plate screws.
d. Ease the IDE shielding plate out of the computer.

1. LCD hinge cover
2. IDE shielding plate

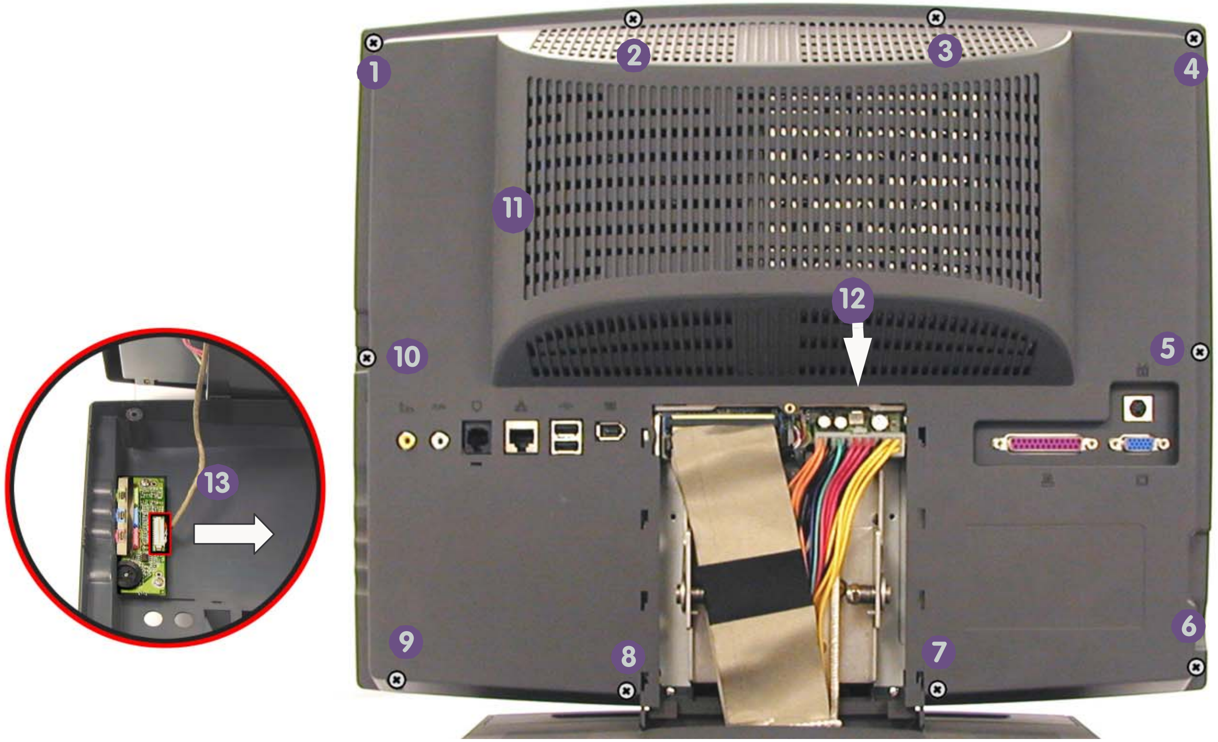
1. Turn **off** the computer and place it with its LCD display facing down on a clean, dry, level surface.
2. Remove screw "**1**" (**Figure 2 - 4a**) from the rear of the computer and slide the LCD hinge cover "**2**" (**Figure 2 - 4b**) up towards the top of the computer and remove it.
3. Remove screws "**3**" and "**4**" (**Figure 2 - 4c**) from the IDE shielding plate "**5**" (**Figure 2 - 4d**) and carefully ease the IDE shielding plate out of the computer.



4. Remove screws "**1**"-"**10**" (**Figure 2 - 5**) from the rear of the LCD back cover "**11**" (**Figure 2 - 5**).
5. Carefully ease the LCD back cover up from the main unit and disconnect the fan cable (see **Fan Cable** note below) from the mainboard at point "**12**" (**Figure 2 - 5**).
6. Disconnect the audio cable "**13**" (**Figure 2 - 5**) from the inside of the case.

Figure 2 - 5
Memory Removal Sequence (Cont..)

a. Remove the screws from the LCD back cover. Ease up the back cover and disconnect the fan and audio cables, then lift the back cover away
b. Remove the screws from the back of the LCD shielding plate.
c. Slide the shielding plate forward and lift away from the main assembly.
d. The memory socket will now be visible.



Fan Cable

Later models will not include the fan cable, and therefore this step may be ignored.

11. LCD back cover

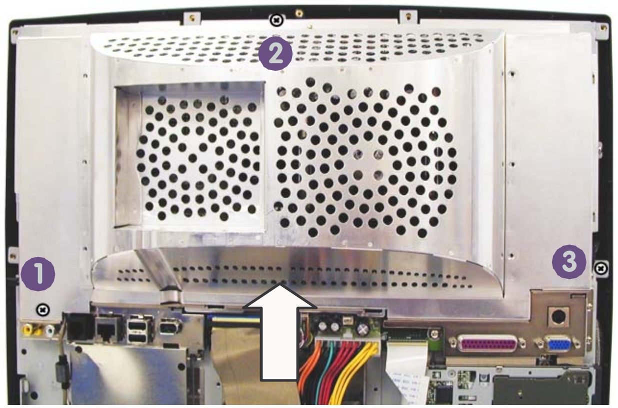
- 10 Screws

Figure 2 - 6
Memory Removal Sequence (Cont.)

a. Remove the screws from the back of the LCD shielding plate.
b. Slide the shielding plate forward and lift away from the main assembly.
c. The memory socket(s) will now be visible
d. Pull the latches to release the module(s).
d. Remove the memory module(s).

7. With the cables disconnected, lift the LCD back cover case away.
8. Remove screws "**1**"-"**3**" (**Figure 2 - 5ab**) from the LCD shielding plate.
9. Slide the LCD shielding plate "**4**" forward and lift it up and away from the main assembly.
10. The memory sockets will now be visible at point "**18**" (**Figure 2 - 5d**) on the mainboard
11. For each module you want to replace, gently pull the two latches toward the sides of the socket to release the module.
12. Remove the memory module(s).

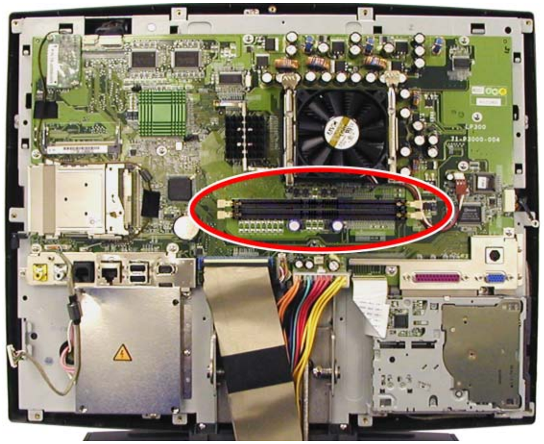
a.



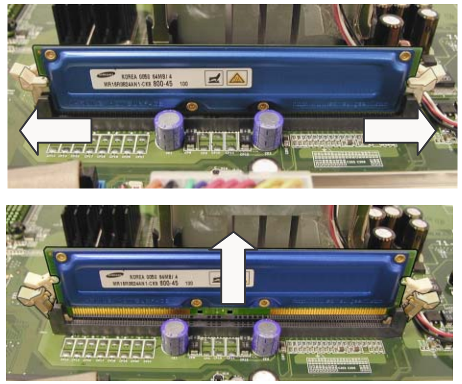
b.



c.



d.



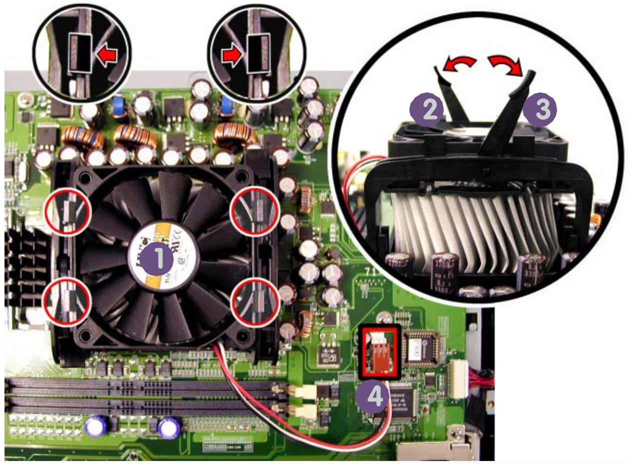
4. LCD shielding plate

- 3 screws

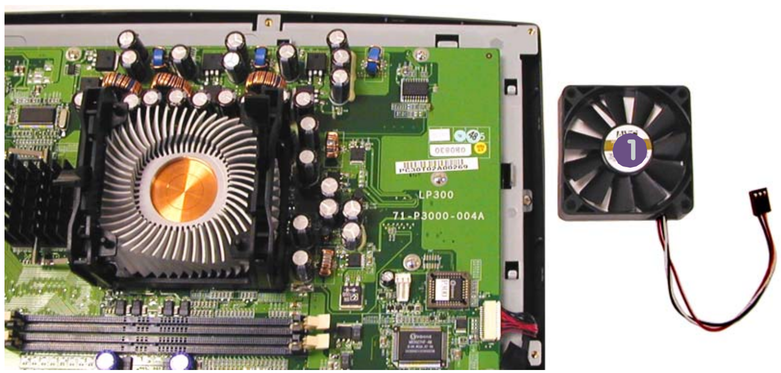
Removing the CPU

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** to reveal the CPU heat sink and fan unit "**1**" in **Figure 2 - 7a**.
2. Release the latches from the top of the CPU heat sink and fan unit as indicated in **Figure 2 - 7a**, then remove the power cable "**4**" from the board and lift the fan unit away.
3. Release the heat sink as indicated in **Figure 2 - 7c.**, and remove it.

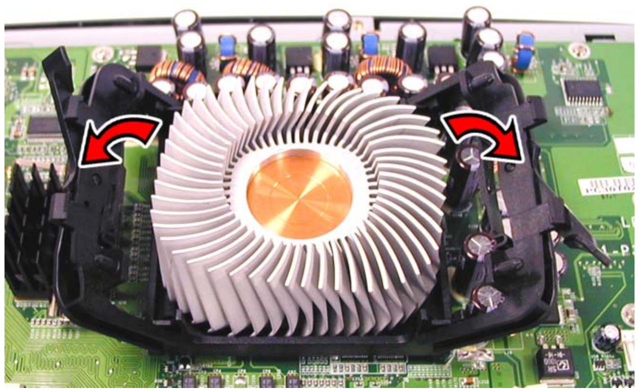
a.



b.



c.



d.

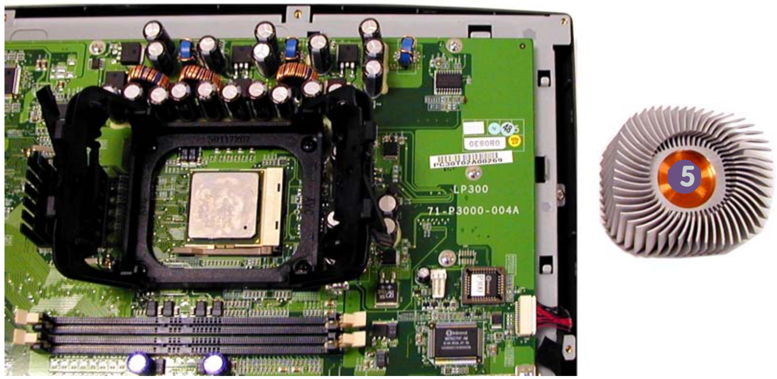


Figure 2 - 7
CPU Removal Sequence

a. Release the latches from the top of the CPU heat sink and fan unit.
b. Remove the power cable and lift the fan unit away
b. Release the heat sink.
c. Remove the heat sink.

Caution

The heat sink, and CPU area in general, contains parts which are subject to high temperatures - Please allow the area time to cool before removing these parts.

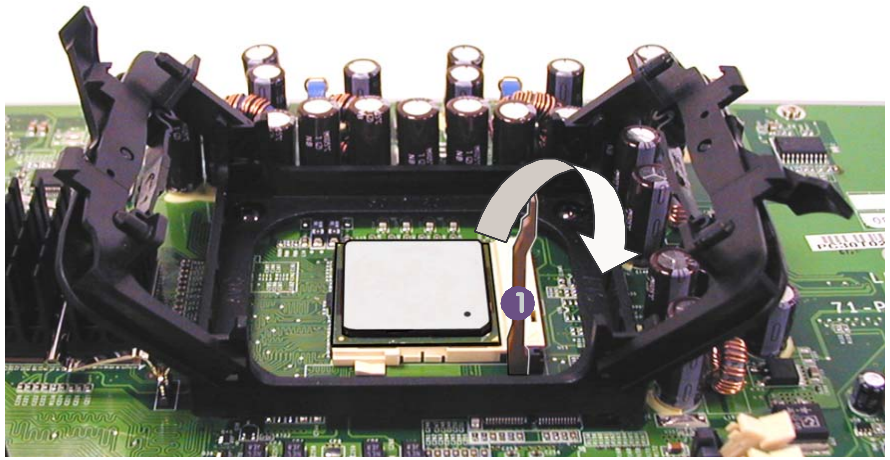
1. CPU Fan Unit
5. Heat Sink

Figure 2 - 8
CPU Removal Sequence (Cont.)

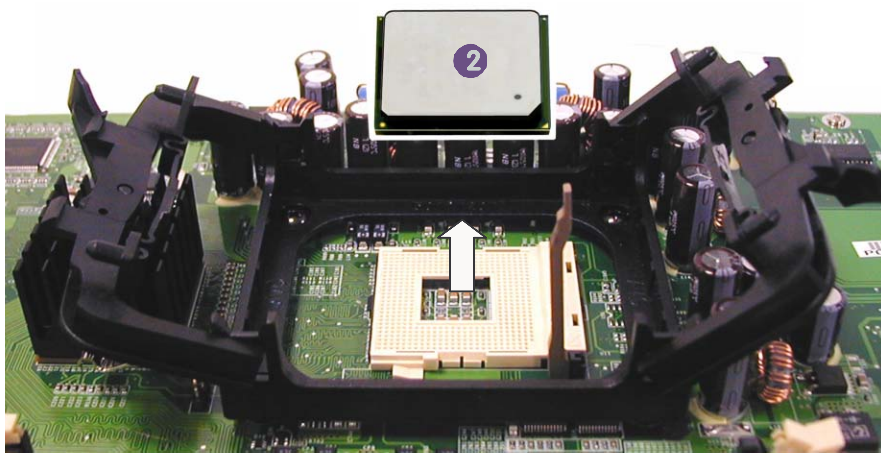
a. Lift the latch to unlock the CPU.
b. Lift the CPU out of the socket.

4. Lift latch "**1**" in the direction indicated in **Figure 2 - 8a** to unlock the CPU.
5. Carefully (it may be hot) lift the CPU up out of the socket.
6. When re-inserting the CPU pay careful attention to the pin alignment, it will fit only one way (don’t force it!).

a.



b.

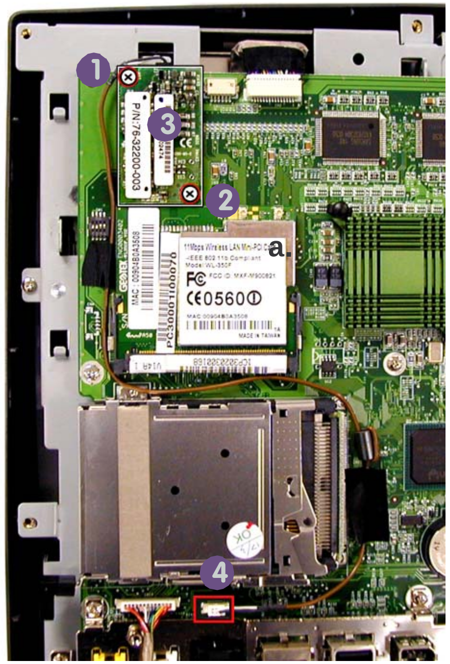


2. CPU

Removing the Modem

1. Follow the sequence of steps **1** to **9** as illustrated in "**Removing the System Memory**" on **page 2 - 14**.
2. Remove screws "**1**" and "**2**" from the modem module "**3**", then disconnect the modem cable "**4**".
3. Disconnect the modem module from the connector socket "**5**", and lift it and the cable off the board.

a.



b.

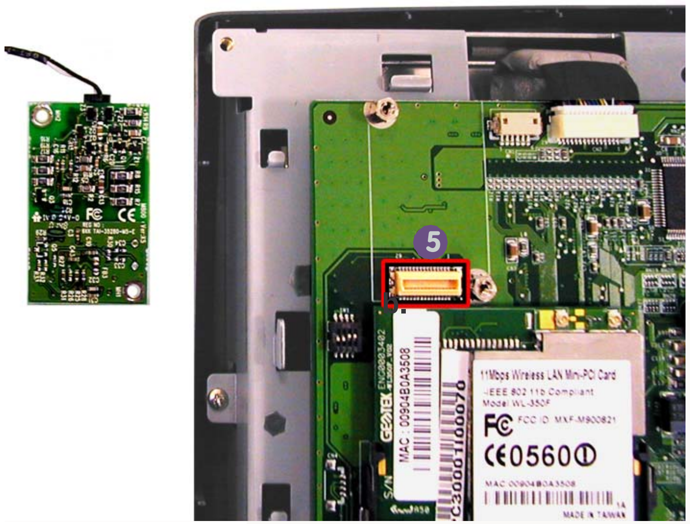


Figure 2 - 9
Modem Removal Sequence

a. Remove the screws from the modem unit, and disconnect the cable.
b. Lift the modem and cable off the board.

3.Modem module
4.Modem cable

- 2 Screws

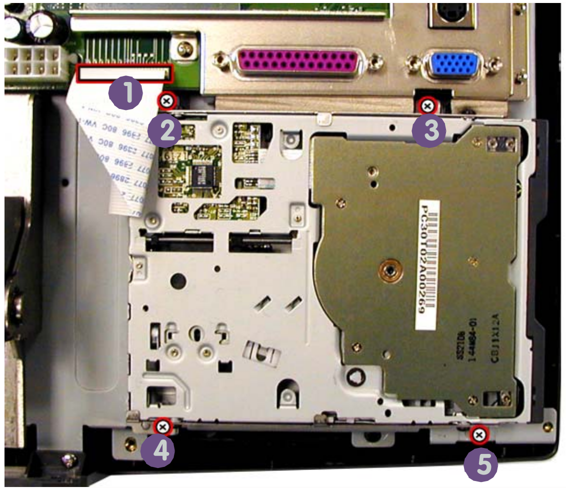
Figure 2 - 10
Floppy Disk Drive Assembly Removal Sequence

a. Disconnect the FDD ribbon cable.
b. Remove the screws from the FDD assembly.

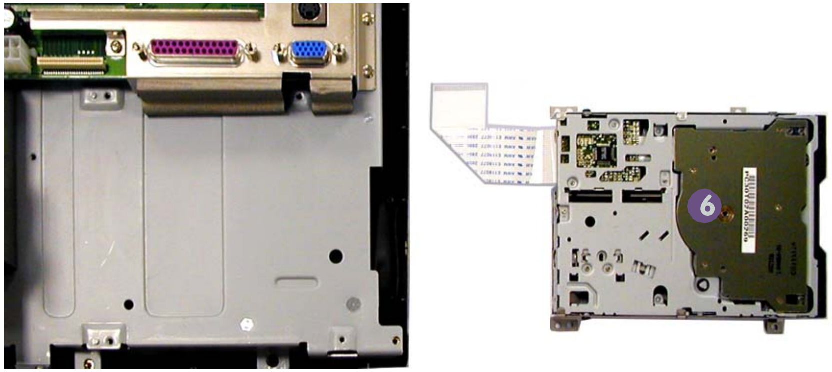
Removing the Floppy Disk Drive Assembly

1. Follow the sequence of steps **1** to **9** as illustrated in "**Removing the System Memory**" on **page 2 - 14**, in order to remove the back case etc.
2. Carefully disconnect the floppy disk drive ribbon cable "**1**" in **Figure 2 - 10a**
3. Remove screws "**4**"-"**5** "(**Figure 2 - 10a**) from the floppy disk drive assembly.
4. Lift the floppy disk drive assembly "**6**" off the board.

a.



b.



6. FDD Assembly

- 4 Screws

Removing the Wireless LAN Module

1. Follow the sequence of steps **1** to **9** as illustrated in "**Removing the System Memory**" on **page 2 - 14**, in order to remove the back case etc.
2. Ease the wireless LAN module "**1**" slowly up and away from the mainboard.

a.



b.



c.

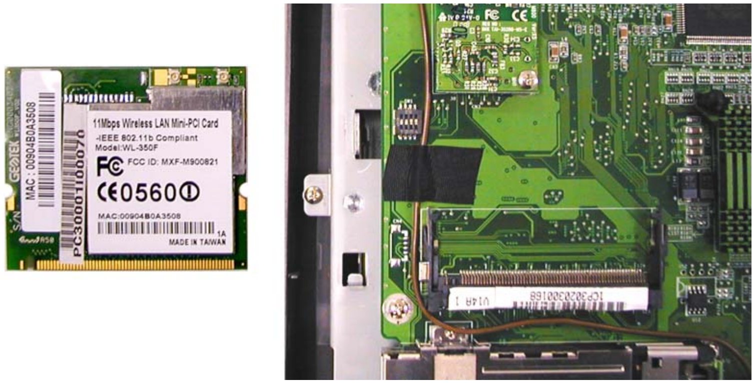


Figure 2 - 11
Wireless LAN Module Removal Sequence

a. Locate the wireless LAN module.
b. Ease the module up.
c. Lift the module away from the mainboard.

1. Wireless LAN module

Figure 2 - 12
I/O Bracket Removal Sequence

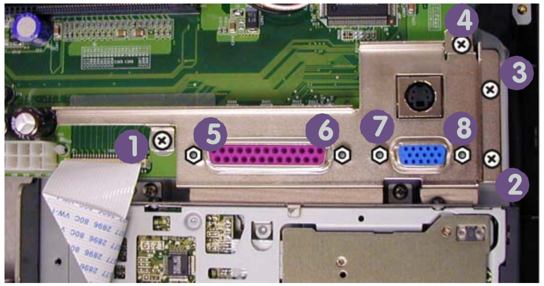
a. Remove the screws, from the I/O bracket.
b. Lift the I/O bracket up off the mainboard.

9. I/O bracket
- 8 screws

Removing the I/O Bracket

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14**, in order to remove the back case etc.
2. Remove the standard screws "**1**"-"**4**" (**Figure 2 - 12a**), and use long-nosed pliers to remove the connector type screws "**5**"-"**8**".
3. Lift the I/O bracket "**9**" up off the mainboard.

a.



b.

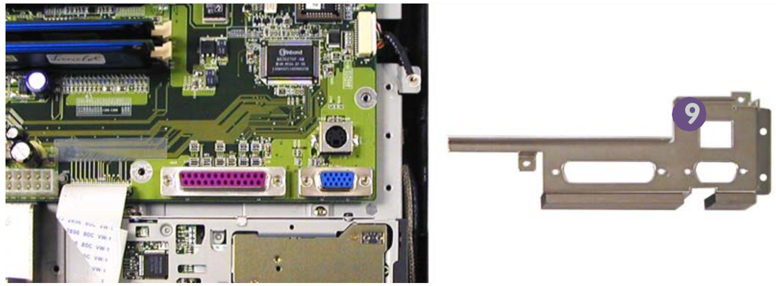


Figure 2 - 13
Rear Bracket Removal Sequence

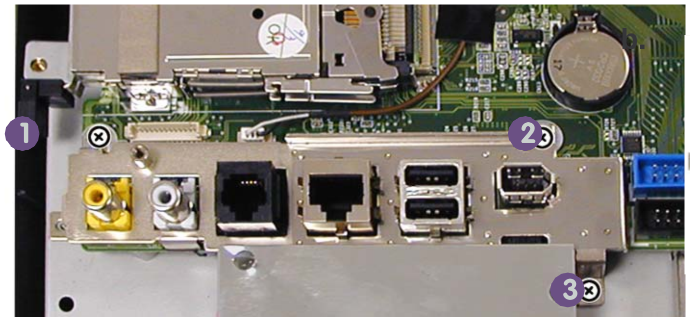
a. Remove the screws, from the rear bracket.
b. Ease the rear bracket up off the mainboard.

4. Rear bracket
- 3 screws

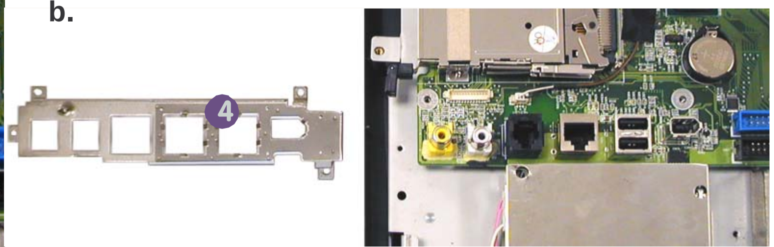
Removing the Rear Bracket

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** in order to remove the back case etc.
2. Remove screws "**1**"-"**3**" (**Figure 2 - 13a**).
3. Carefully ease the I/O bracket "**4**" up off the mainboard.

a.



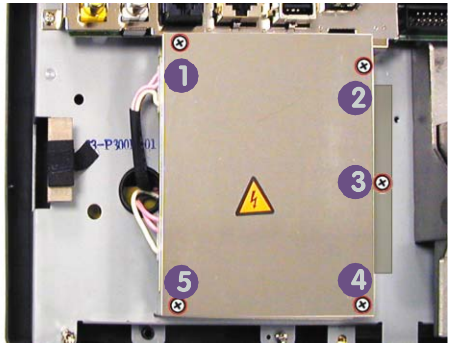
b.



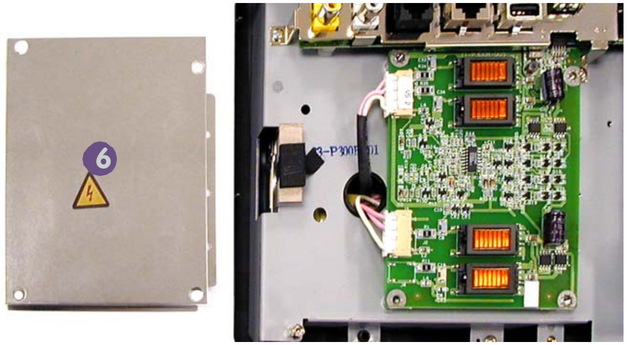
Removing the Inverter Board

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** in order to remove the back case etc.
2. Remove screws "**1**"-"**5**" from the inverter board shielding plate, and lift out the shielding plate "**6**".
3. Disconnect the two connectors "**7**" and "**8**" from the inverter board, then elevate the inverter board slightly and pull it in the direction of the arrow (**Figure 2 - 14c**) to release it from the connector "**9**" on the mainboard.
4. Lift the inverter board "**10**" up and out from the mainboard.

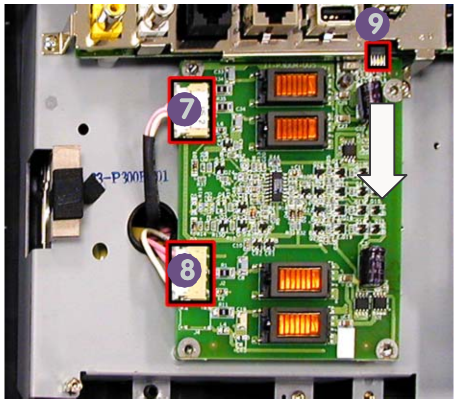
a.



b.



c.



d.

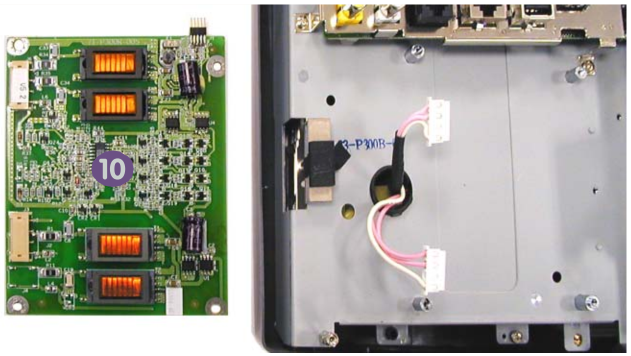


Figure 2 - 14
Inverter Board Removal Sequence

a. Remove the screws from the shielding plate.
b. Lift out the shielding plate.
c. Disconnect the two connectors, elevate the inverter board slightly, and carefully pull in the direction of the arrow.
d. Lift the inverter board up and out from the mainboard.

6. Inverter board shielding plate
10. Inverter board

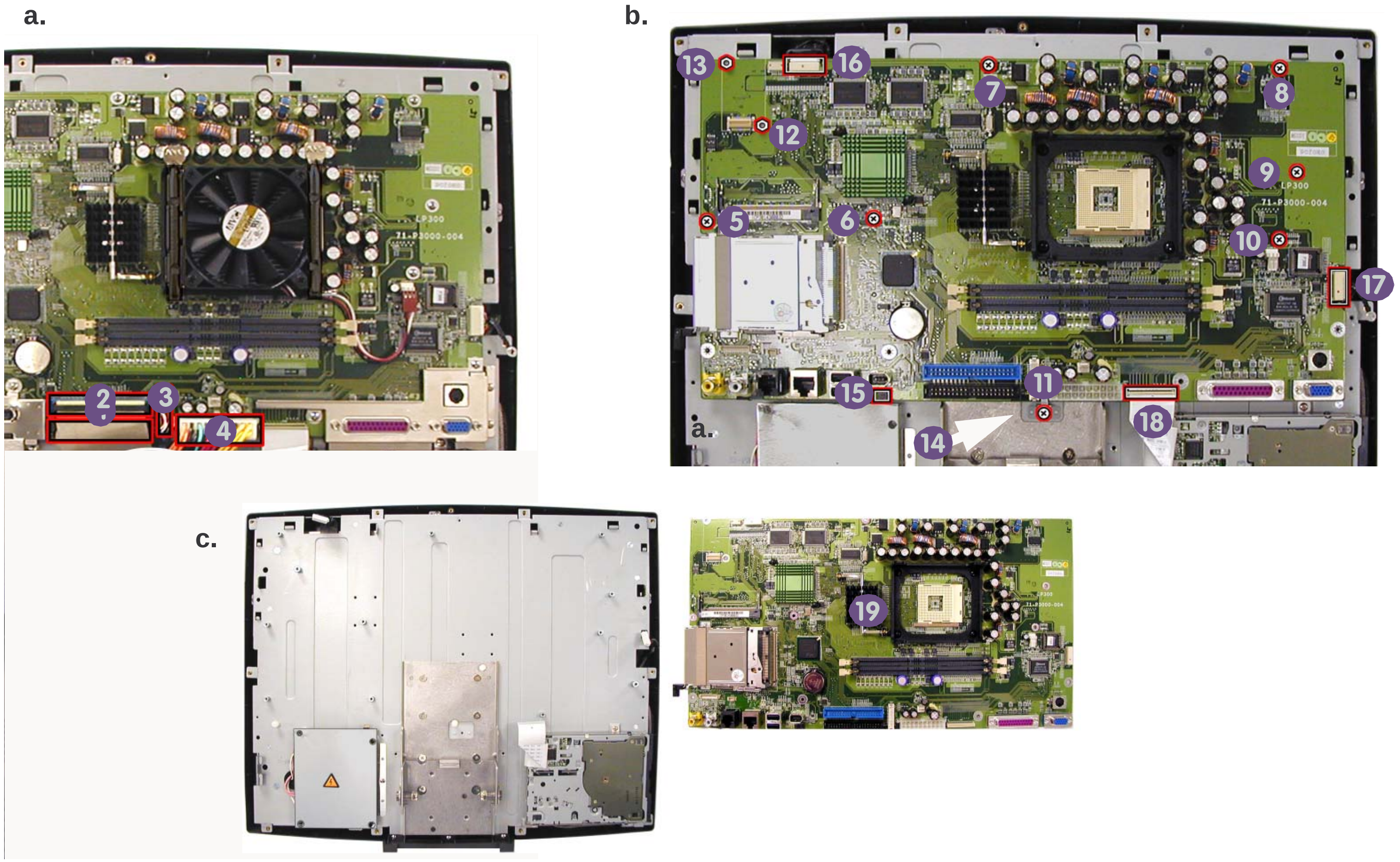
- 5 screws

Removing the Mainboard

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** in order to remove the back case etc.
2. Disconnect cables "**1**"-"**4**" which connect the top half of the unit to the base.
3. Remove the standard screws "**5**"-"**11**" and the connector type screws "**12**"-"**13**" (lift away the small bracket "**14**").
4. Disconnect cables "**15**"-"**18**" and lift the mainboard "**19**" up from the LCD bracket.

Figure 2 - 15
Rear Bracket Removal Sequence

a. Disconnect the cables which connect the top half of the unit to the base.
b. Remove the screws and connecting cables.
c. Lift the mainboard up from the LCD bracket.



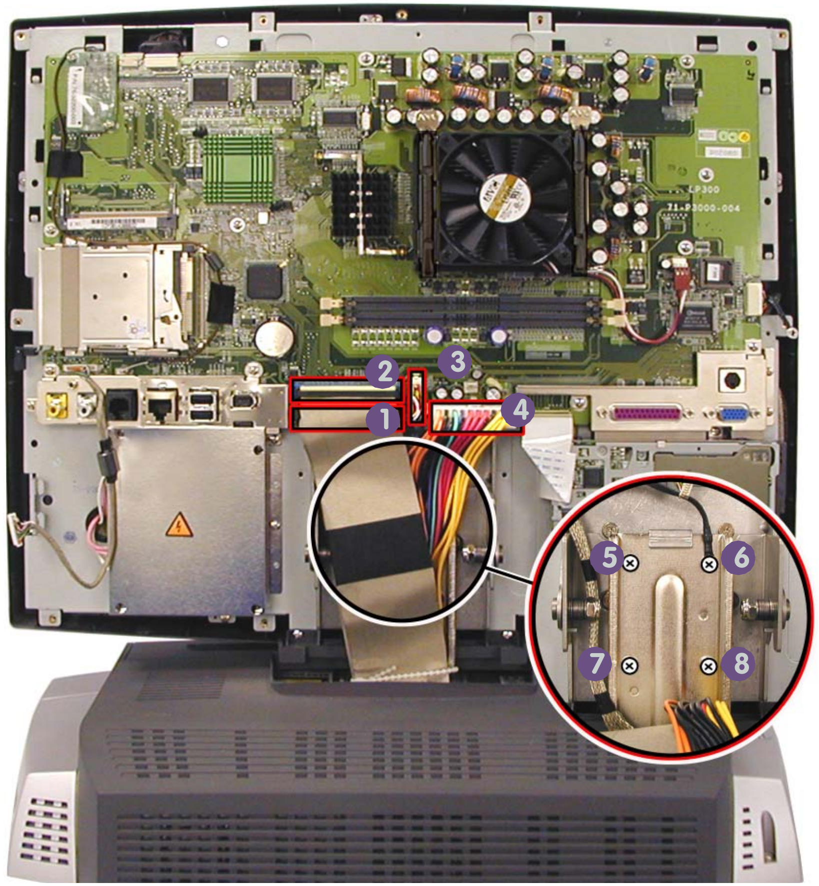
14. Bracket
19. Mainboard

- 9 screws

Separating the Bottom Case from the LCD & Mainboard Assembly

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** in order to remove the back case etc.
2. Disconnect cables "**1**"-"**4**" which connect the top half of the unit to the base.
3. Remove screws "**5**"-"**8**" and ease the bottom case away from the LCD & mainboard assembly.

a.



b.



Figure 2 - 16

Bottom Case Removal Sequence

a. Disconnect the cables, and remove the screws which connect the top half of the unit to the base.

c. Ease the bottom case away from the LCD & mainboard.

9. Bottom case
10. LCD & mainboard assembly

- 4 screws

Figure 2 - 17
LCD Removal Sequence

a. Remove the screws from the LCD bracket and disconnect the inverter cables.
b. Separate the LCD bracket from the front of the case.
c. Remove the screws from the LCD.
d. Lift the LCD away from the bracket.

7. Front case
12. LCD
13. LCD bracket

- 8 screws

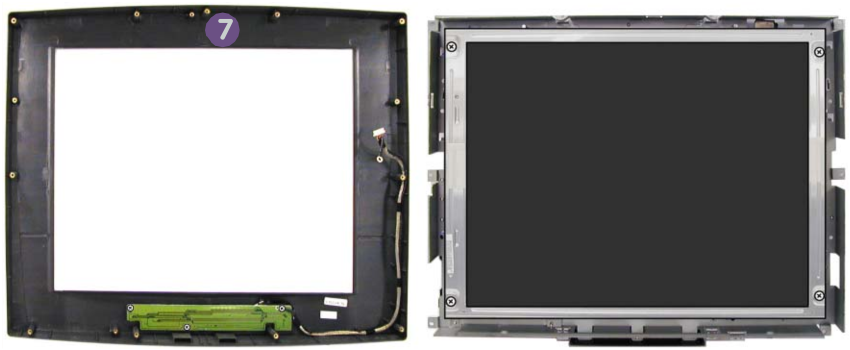
Removing the LCD

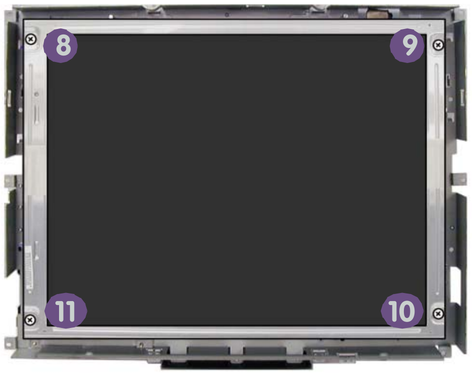
1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** in order to remove the back case etc.
2. Follow the instructions in **“Separating the Bottom Case from the LCD & Mainboard Assembly” on page 2 - 25**.
3. Remove screws "**1**"-"**4**" from the back of the LCD bracket, and disconnect the inverter cables "**5**"-"**6**" (if you haven’t already done so).
4. Carefully separate the LCD bracket from the front of the case "**7**".
5. Remove screws "**8**"-"**11**" from the LCD "**12**" and lift it away from the bracket "**13**" (pay careful attention to the inverter cables easing them through the hole at point "**14**").

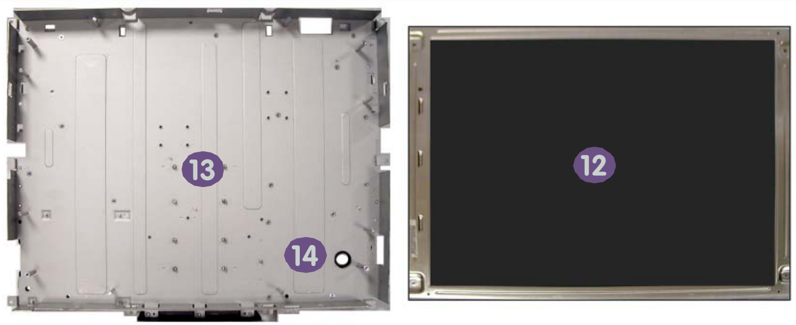
a.



b.



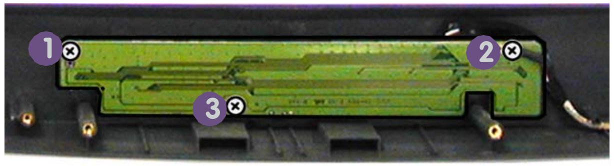




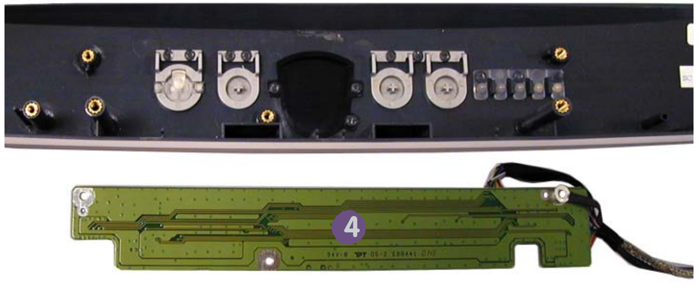
Removing the LED Board

1. Follow the sequence of steps **1** to **9** as illustrated in "**Removing the System Memory**" on **page 2 - 14** in order to remove the back case etc.
2. Follow the instructions in **"Separating the Bottom Case from the LCD & Mainboard Assembly" on page 2 - 25**.
3. Separate the front case from the LCD as illustrated in **"Removing the LCD" on page 2 - 26**.
4. Remove screws "**1**"-"**3**" and lift the LED board "**4**" and cable out from the front of the case.

a.



b.



c.

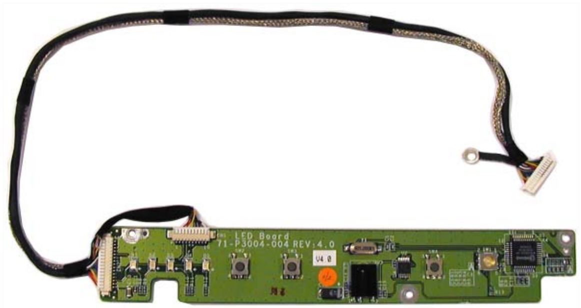


Figure 2 - 18
LED Board Removal Sequence

a. Remove the screws from the LED board.
b. Lift the board out from the front of the case.

4. LED board

- 3 screws

2.Disassembly

Removing the Base Cover

1. Remove the CD drives as illustrated in **“Removing the CD Devices” on page 2 - 11** (incl. RF Module **page 2 - 12**).
2. Remove the HDD drive as illustrated in **“Removing the Hard Disk Drive Assembly” on page 2 - 10**.
3. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** in order to remove the back case etc.
4. Follow the instructions in **“Separating the Bottom Case from the LCD & Mainboard Assembly” on page 2 - 25.**
5. Remove screws "**1**"-"**9**" from the base unit.
6. Lift the base cover "**10**" off the bottom of the unt.

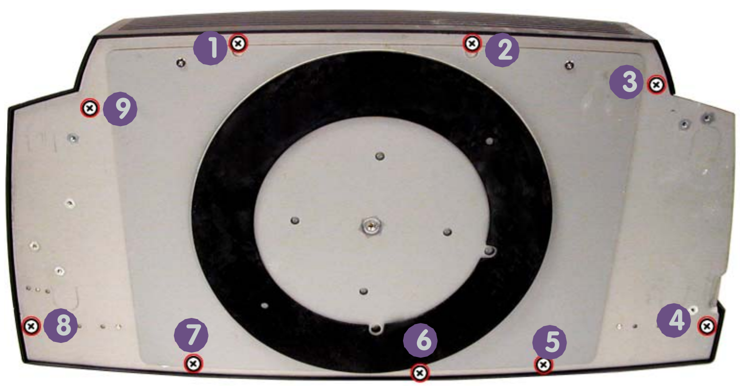
Figure 2 - 19
Base Cover Removal Sequence

a. Remove the CD drives, hard disk and separate the bottom case from the LCD & mainboard assembly
c. Remove the screws from the base.
d. Lift the cover up from the bottom unit.

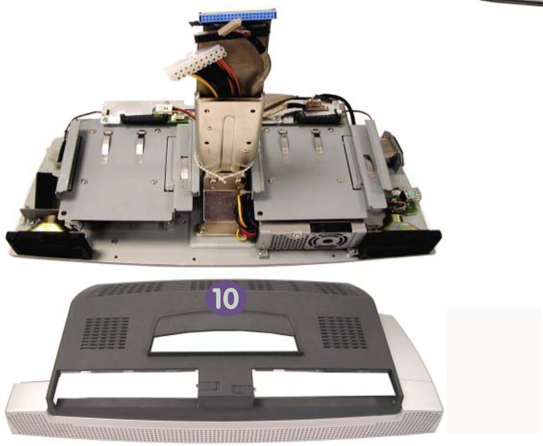
a.



b.



c.



10. Base cover module

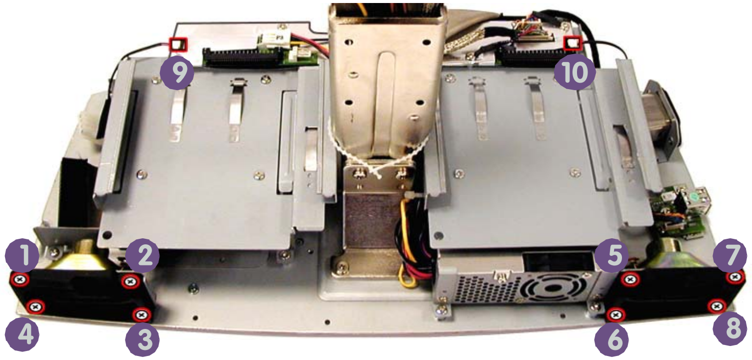
- 9 Screws

2.Disassembly

Removing the Speaker Units

1. Follow the instructions to remove the base cover (**“Removing the Base Cover” on page 2 - 28**).
2. Remove screws "**1**"-"**8**" and disconnect the speaker cables "**9**"-"**10**", then remove the speaker units "**11**"-"**12**".

a.



b.

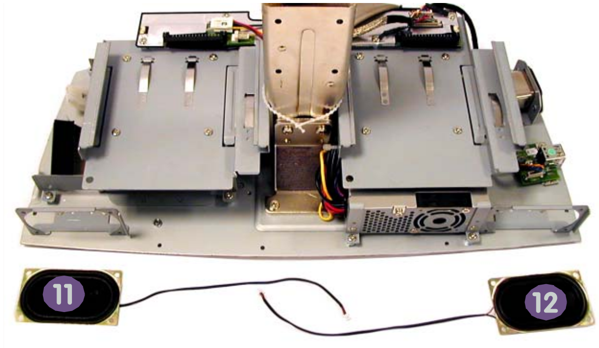


Figure 2 - 20
Speaker Unit Removal Sequence

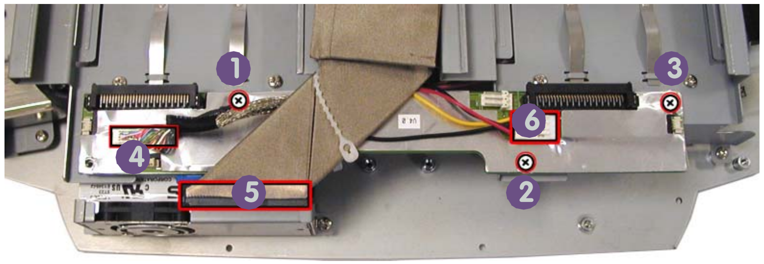
a. Remove the screws from the speaker units and disconnect the cables.
b. Remove the speaker units.

11. Speaker units
- 8 screws

Removing the Bridge Board

1. Follow the instructions to remove the base cover (**“Removing the Base Cover” on page 2 - 28**).
2. Disconnect the speaker cables "**9**"-"**10**" (**Figure 2 - 20a**) above.
3. Remove screws "**1**"-"**3**" and disconnect cables "**3**"-"**6**".
4. Lift the bridge board "**7**" up off the base unit.

a.



b.

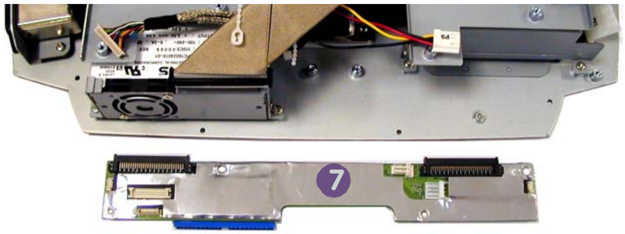


Figure 2 - 21
Bridge Board Removal Sequence

a. Remove the screws and disconnect the cables.
b. Remove the bridge board.

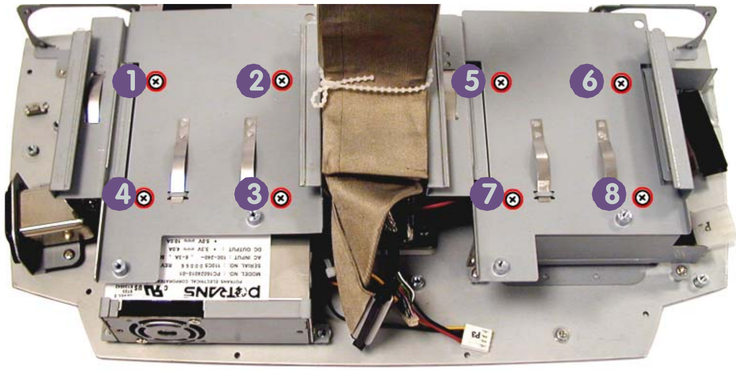
7. Bridge board
- 3 screws

Removing the CD Device Base Brackets

1. Follow the instructions to remove the bridge board (**"Removing the Bridge Board" on page 2 - 29**).
2. Remove screws "**1**"-"**8**" and lift away the CD device base brackets.

.

a.



b.

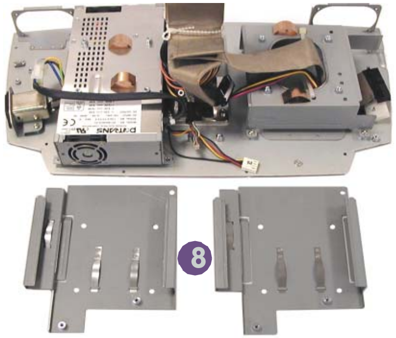


Figure 2 - 22
CD Device Base Bracket Removal Sequence

a. Remove the screws from the base brackets.
b. Remove the base brackets.

8. 2 * Base brackets
• 8 screws

Removing the USB Board

1. Follow the instructions to remove the bridge board (**"Removing the Bridge Board" on page 2 - 29**).
2. Remove screws "**1**"-"**3**" (you may have already removed screw "**3**" as part of the process of removing the bridge board).
3. Disconnect the cable at point "**4**", then remove the USB board "**5**".

a.



b.

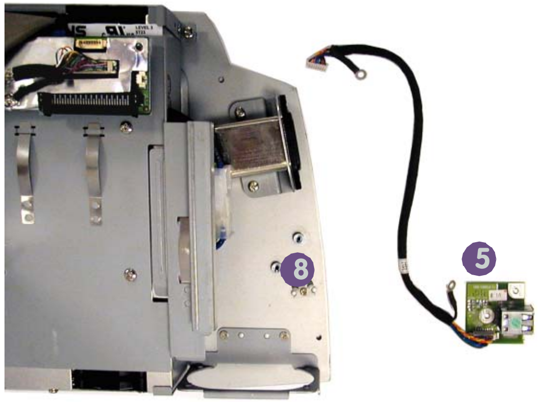


Figure 2 - 23
USB Board Removal Sequence

a. Remove the screws from the USB board, and disconnect the cable.
b. Remove the USB board.

5. USB board
• 3 screws

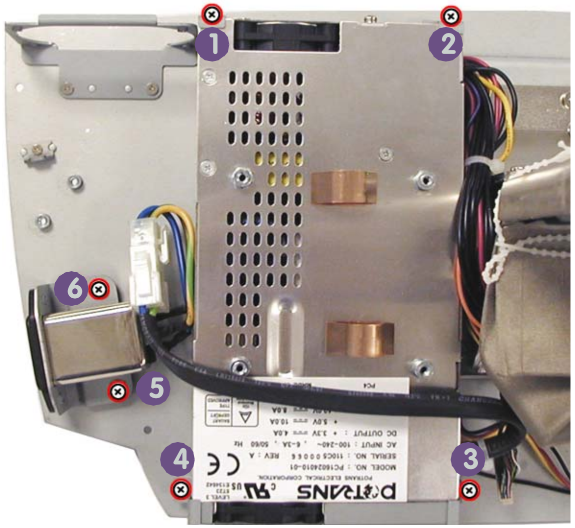
Removing the Power Supply Unit

1. Follow the instructions to remove the bridge board (**“Removing the Bridge Board” on page 2 - 29**).
2. Follow the instructions to remove CD device base brackets (**“Removing the CD Device Base Brackets” on page 2 - 30**).
3. Remove screws "**1**"-"**6**" and lift the power supply "**7**" off the base bracket.

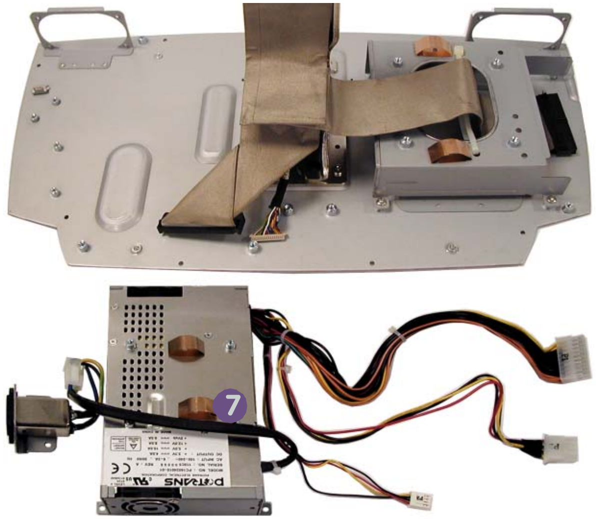
Figure 2 - 24
Power Supply Removal Sequence

a. Remove the screws from the power supply unit.
b. Remove the power supply unit.

a.



b.



7. Power supply unit
- 6 screws

Appendix A:Part Lists

This appendix breaks down the LCD PC's construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

Note: This section indicates the *manufacturer's* part numbers. Your organization may use a different system, so be sure to cross-check any relevant documentation.

Note: Some assemblies may have parts in common (especially screws). However, the part lists DO NOT indicate the total number of duplicated parts used.

Note: Be sure to check any update notices. The parts shown in these illustrations are appropriate for the system at the time of publication. Over the product life, some parts may be improved or re-configured, resulting in *new* part numbers.

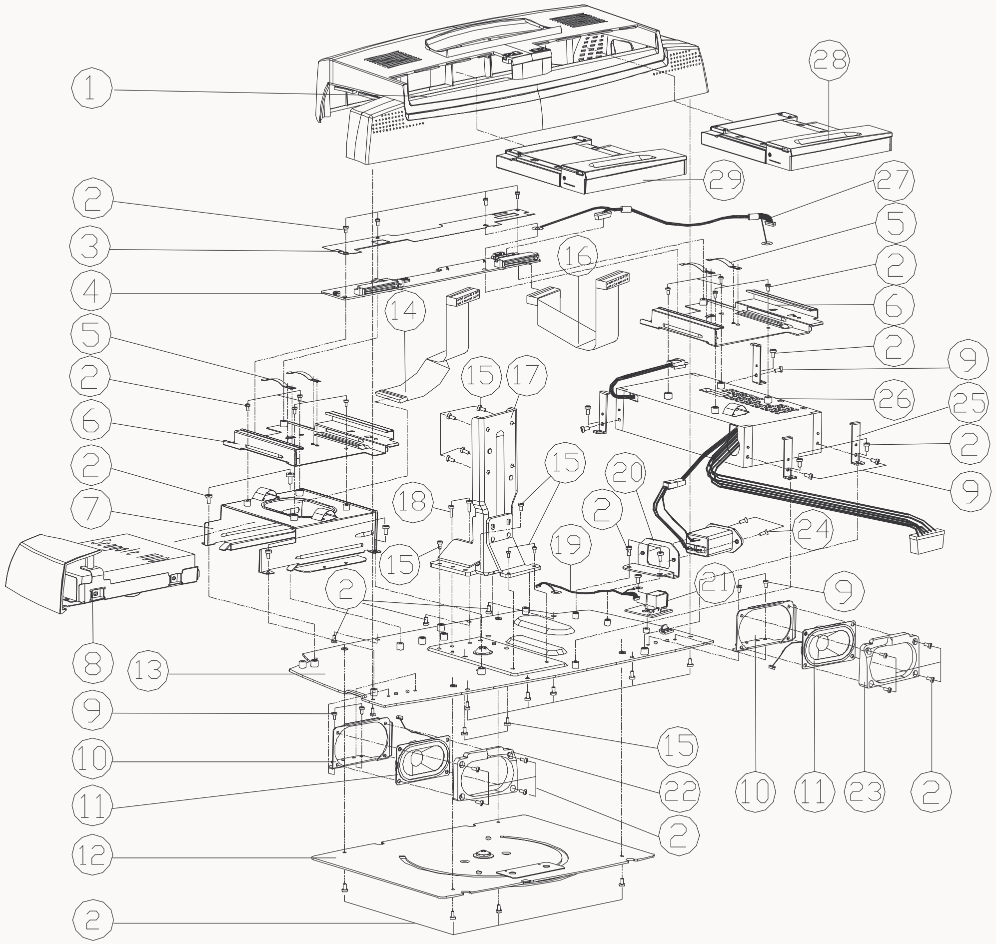
Part List Illustration Location

The following table indicates where to find the appropriate part list illustration.

Table 1 - 1
Part List Illustration Location

Part	Page #
Base-1	page 1 - 3
Back Acer17"	page 1 - 4
Back LG 18"	page 1 - 5
LCD Front	page 1 - 6
Floppy Disk Drive	page 1 - 7
Hard Disk Drive	page 1 - 8
CD-ROM Drive	page 1 - 9
DVD-ROM Drive	page 1 - 10
CD-RW Drive	page 1 - 11

Base-1 (LP300)

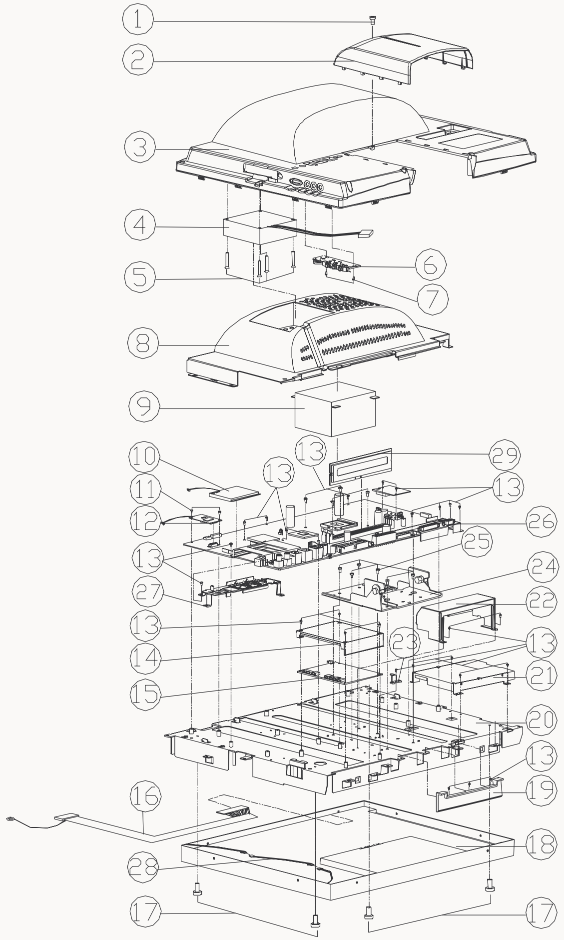


ITEM	PART NAME	PART NO	REMARK
1	BASE COVER MODULE LP300	39-P3003-011	
2	SCREW M3*6L B NI ICT NY	35-41130-6RA	
3	BRIDGE BOARD MYLAR AL LP300	40-P305S-011	
4	BRIDGE BOARD	77-P3007-004	
5	CD-ROM BASE BRK. GROUNDING PLATE CU LP300	33-P300Z-030	
6	CD-ROM BASE BRACKET SECC LP300	33-P300C-011	
7	HDD BASE BRACKET SECC LP300	33-P300C-021	
8	W/O HDD ASS'Y	79-P302I-010	
9	SCREW M3*0.5P*4L K1NI ICT NY	35-B1130-4R0	
10	SPEAKER BRACKET SECC LP300	33-P300C-060	
11	SPK+CON. 70W×41D×28H	23-5A230-191	
12	STAND BRACKET MODULE SECC LP300	33-P307C-200	
13	BASE BRACKET MOUDLE SECC LP300	33-P307C-101	
14	WIRE CABLE FOR HDD V2.0 LP300	43-P300I-011	
15	SCREW M4*8L KI NI ICT NY	35-B1140-8RA	
16	WIRE CABLE FOR BRIDGE BOARD V2.0 LP300	43-P300S-021	
17	HINGE BASE MODULE SPCC LP300	33-P307Y-201	
18	SCREW M4*12L B BK/Z ICT NY	35-46140-12A	
19	WIRE CABLE FOR USB BOARD TO BRIDGE BOARD	43-P300S-040	
20	POWER FILLETER BRACKET SECC LP300	33-P300C-040	
21	USB BOARD	77-P3003-001	
22	SPEAKER RUBBER (L) SILICONE LP300	47-P301T-021	
23	SPEAKER RUBBER (R) SILICONE LP300	47-P301T-011	
24	SCREW M3*8L	35-21130-8RA	
25	POWER BRACKET SECC LP300	33-P300C-030	
26	POWER SUPPLY 160W PC16024010-010	51-P3003-030	
27	WIRE CABLE FOR CD-ROM TO M/B V2.0 LP300	43-P300S-031	
28	DVD-ROM ASS'Y(OPTION)	79-P302V-010	
28	CD-RW ASS'Y(OPTION)	79-P302W-010	
29	CD-ROM ASS'Y(OPTION)	79-P302Z-010	

Figure 1 - 1
Base-1

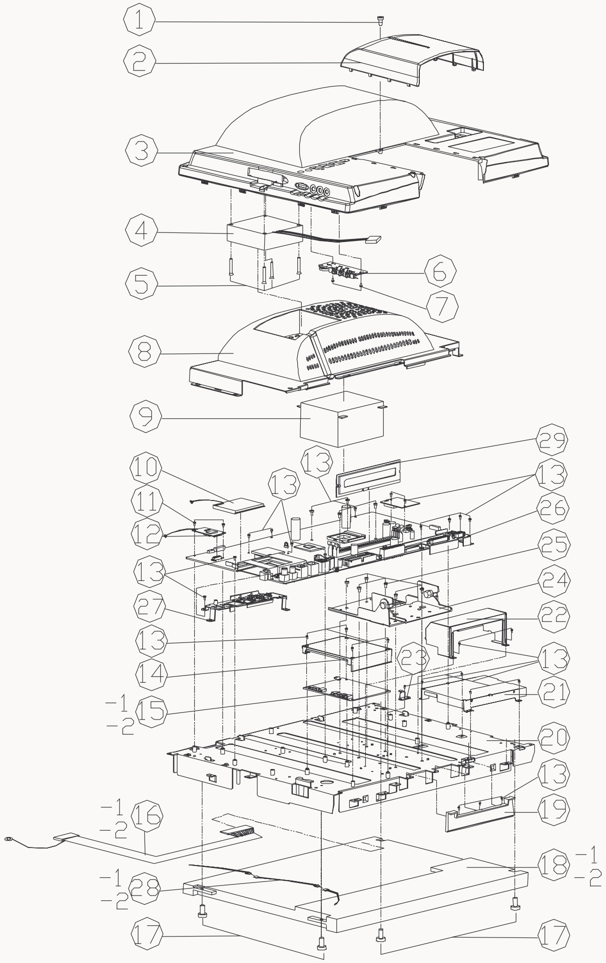
Back - Acer 17” (LP300)

Figure 1 - 2
Back Acer 17” (LP300)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M3*6L B NI ICT NY	35-41130-6RA	
2	LCD HINGE COVER PC+ABS LP300	42-P307Y-011	
3	LCD BACK COVER MODULE LP300	39-P3001-022	
4	FAN+CON 80mm 12V 0.1A D8025B12L AVC	23-A8020-081	
5	SCREW M3*29L F NI ICT NY	35-21130-29A	
6	PHONE JACK BOARD	77-P300A-004	
7	SCREW M2.5*6L B NI ICT NY	35-41125-6R0	
8	LCD BACK COVER SHIELDING PLATE AL LP300	33-P300B-032	
9	CPU HEAT SINK+FAN MODULE LP300	31-P307B-102	
10	MINI PCI MODEM ASS'Y LP300	79-P302U-020	
11	SCREW M2.5*3L B NI ICT NY	35-41125-3RA	
12	MDC MODEM ASS'Y LP300	79-P302U-010	
13	SCREW M2.5*6L B NI ICT NY	35-41125-6R0	
14	INVERTER SHIELDING PLATE SPTE LP300	33-P300B-060	
15	INVERTER BOARD FOR ACER/CHI MEI 17”	77-P300R-004	
16	WIRE CABLE FOR SAMSUNG LTM170E4-L01	43-P3001-011	
17	SCREW M3*8L B NI ICT NY	35-41130-8RA	
18	LCD 17” TFT ACER L170E3-1 20mm	50-N32K0-B00	
19	CONCEAL COVER PC+ABS LP300	42-P307B-011	
20	LCD BRACKET FOR ACER 17” SECC LP300	33-P300B-022	
21	FDD ASS'Y LP300	79-P302J-010	
22	IDE SHIELDING PLATE SPTE LP300	33-P300B-082	
23	MB SUPPRESS BRACKET SECC LP300	33-P300B-070	
24	HINGE TOP MODULE SUS LP300	33-P307Y-101	
25	SCREW M4*8L KI NI ICT NY	35-B1140-8RA	
26	MAIN BOARD	77-P3000-004	
27	REAR BRACKET SPCC	33-P300B-042	
28	LCD TO INVERTERWIRE CABLE FOR UNIPAC 17”	43-P3001-040	
29	REAM CARD 32bit	77-P301T-001	

Back - LG 18” (LP300)



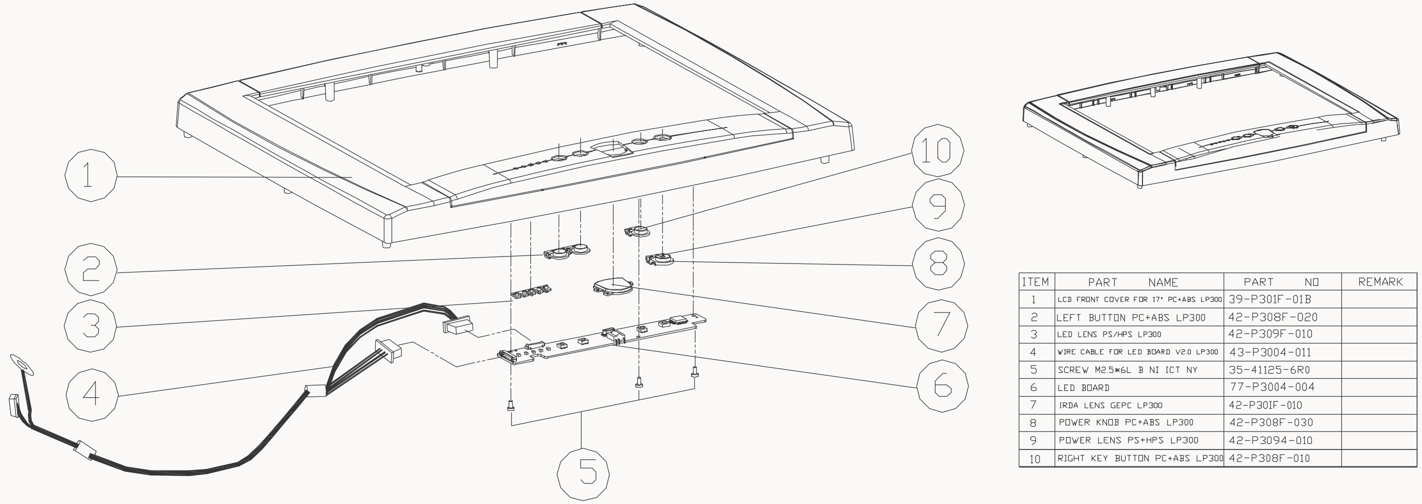
ITEM	PART NAME	PART NO	REMARK
1	SCREW M3*6L B NI ICT NY	35-41130-6RA	
2	LCD HINGE COVER PC+ABS LP300	42-P307Y-011	
3	LCD BACK COVER MODULE LP300	39-P3001-022	
4	FAN+CON 80mm 12V 0.1A D8025B12L AVC	23-A8020-081	
5	SCREW M3*29L F NI ICT NY	35-21130-29A	
6	PHONE JACK BOARD	77-P300A-004	
7	SCREW M2.5*6L B NI ICT NY	35-41125-6R0	
8	LCD BACK COVER SHIELDING PLATE AL LP300	33-P300B-032	
9	CPU HEAT SINK+FAN MODULE LP300	31-P307B-102	
10	MINI PCI MODEM ASS'Y LP300	79-P302U-020	
11	SCREW M2.5*3L B NI ICT NY	35-41125-3RA	
12	MDC MODEM ASS'Y LP300	79-P302U-010	
13	SCREW M2.5*6L B NI ICT NY	35-41125-6R0	
14	INVERTER SHIELDING PLATE SPTE LP300	33-P300B-060	
15-1	INVERTER BOARD FOR LG.180(LM181E1-J3MN)	77-P300R-014	
15-2	INVERTER BOARD FOR LG.180(LM181E04)	77-P300R-024	
16-1	WIRE CABLE FOR LG LM181E V1.0 LP300	43-P3001-060	
16-2	WIRE CABLE FOR LG LM181E04 LP300	43-P3001-050	
17	SCREW M4.5*10L B NI ICT NY	35-41145-10A	
18-1	LCD 18.1" TFT LG LM181E1-J3MN 22.5mm	50-P32M5-L01	
18-2	LCD 18.1" TFT LG LM181E04 21.5mm	50-P32L5-L00	
19	CONCEAL COVER PC+ABS LP300	42-P307B-011	
20	LCD BRACKET FOR LG.18" SECC LP300	33-P300B-100	
21	FDD ASS'Y LP300	79-P302J-010	
22	IDE SHIELDING PLATE SPTE LP300	33-P300B-082	
23	MB SUPPRESS BRACKET SECC LP300	33-P300B-070	
24	HINGE TOP MODULE SUS LP300	33-P307Y-101	
25	SCREW M4*8L KI NI ICT NY	35-B1140-8RA	
26	MAIN BOARD	77-P3000-004	
27	REAR BRACKET SPCC	33-P300B-042	
28-1	LCD TO INVERTERWIRE CABLE FOR SAMSUNG	43-P3001-030	
28-2	LCD TO INVERTERWIRE CABLE FOR UNIPAC 17"	43-P3001-040	
29	REAM CARD 32bit	77-P301T-001	

Figure 1 - 3
Back LG 18” (LP300)

Part Lists

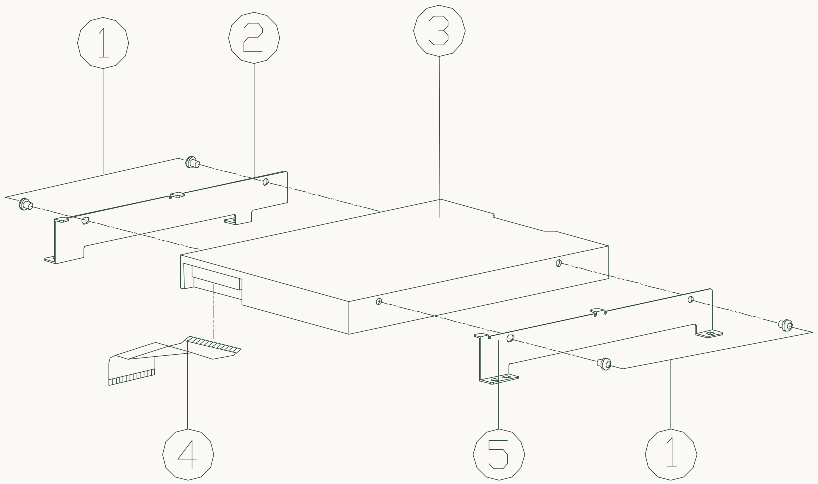
LCD Front (LP300)

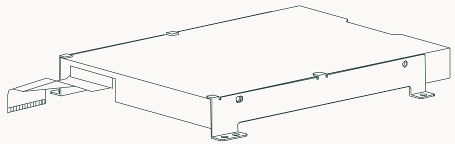
Figure 1 - 4
LCD Front (LP300)



ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER FOR 17' PC+ABS LP300	39-P301F-01B	
2	LEFT BUTTON PC+ABS LP300	42-P308F-020	
3	LED LENS PS/HPS LP300	42-P309F-010	
4	WIRE CABLE FOR LED BOARD V2.0 LP300	43-P3004-011	
5	SCREW M2.5*6L B NI ICT NY	35-41125-6R0	
6	LED BOARD	77-P3004-004	
7	IRDA LENS GEPC LP300	42-P30IF-010	
8	POWER KNOB PC+ABS LP300	42-P308F-030	
9	POWER LENS PS+HPS LP300	42-P3094-010	
10	RIGHT KEY BUTTON PC+ABS LP300	42-P308F-010	

Floppy Disk Drive (LP300)



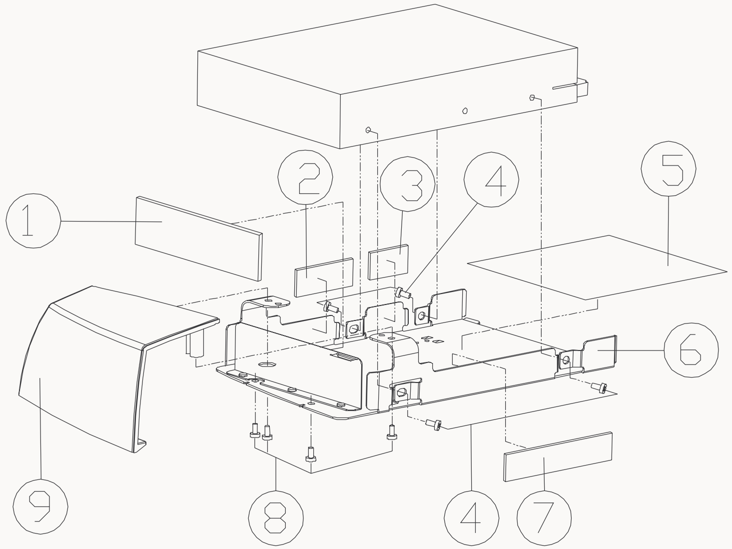


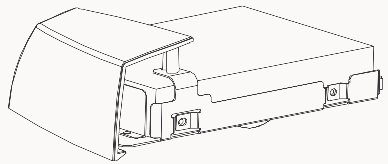
ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.5*3L P Bz ICT NY	35-06125-3R0	
2	FDD BRACKET (R) SUS LP200	33-P2204-001	
3	FDD 3.5" 1.44MB 12.7mm(Y-E DATA)	85-11700-Y06	702J-6637J
4	FFC CABLE FOR FDD V1.0 LP300	43-P300J-010	
5	FDD BRACKET (L) SUS LP200	33-P22054-000	

Figure 1 - 5
Floppy Disk Drive (LP300)

Hard Disk Drive (LP300)

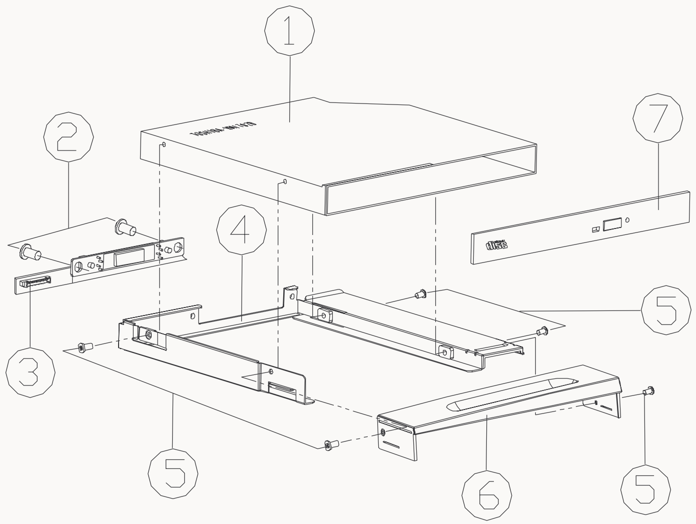
Figure 1 - 6
Hard Disk Drive (LP300)

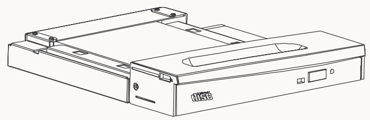




ITEM	PART NAME	PART NO	REMARK
1	THERMAL PAD FOR HDD BRK.(SIDE 4) L90*W23*3H	47-P302I-050	
2	THERMAL PAD FOR HDD BRK.(SIDE 2) L50*W13*3H	47-P302I-030	
3	THERMAL PAD FOR HDD BRK.(SIDE 1) L20*W13*3H	47-P302I-020	
4	SCREW M3*6L B NI ICT NY	35-41130-6RA	
5	THERMAL PAD FOR HDD BRK.(BOTTOM) L120*W85*0.5H	47-P302I-040	
6	HDD HOUSING BRACKET SUS LP300	33-P300I-011	
7	THERMAL PAD FOR HDD BRK.(SIDE 3) L80*W13*3H	47-P302I-010	
8	SCREW #6-32*5L B NI ACT	35-41306-5R0	
9	HDD HOUSING PC+ABS LP300	42-P304I-010	

CD-ROM Drive (LP300)



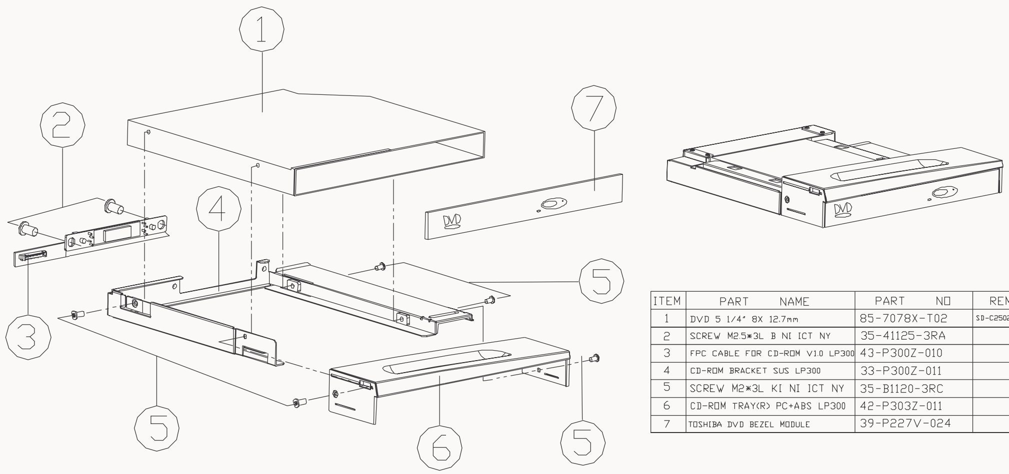


ITEM	PART NAME	PART NO	REMARK
1	CD-ROM+W/BEZEL 5 1/4" 24X 12.7mm	85-607OX-P04	CR-177-DPK-1(MKE)
2	SCREW M2.5*3L B NI ICT NY	35-41125-3RA	
3	FPC CABLE FOR CD-ROM V1.0 LP300	43-P300Z-010	
4	CD-ROM BRACKET SUS LP300	33-P300Z-011	
5	SCREW M2*3L KI NI ICT NY	35-B1120-3RC	
6	CD-ROM TRAY(L) PC+ABS LP300	42-P303Z-021	
7	CD-ROM BEZEL MODULE FOR MKE LP200	79-P2202-011	

Figure 1 - 7
CD-ROM Drive (LP300)

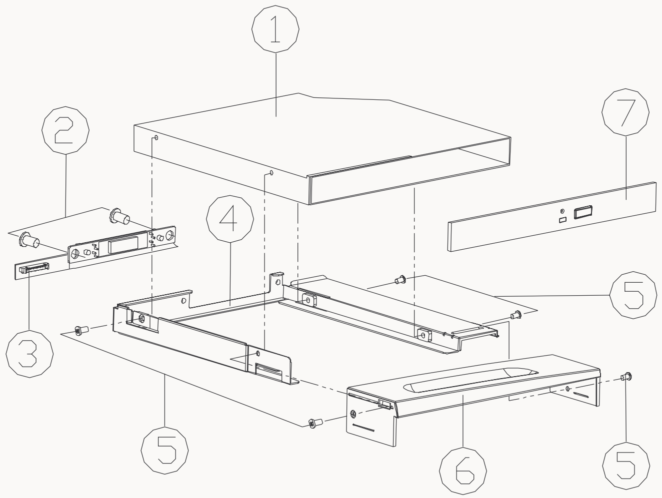
DVD-ROM Drive (LP300)

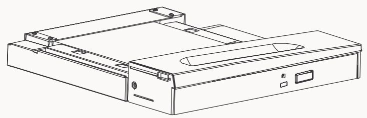
Figure 1 - 8
DVD-ROM Drive (LP300)



ITEM	PART NAME	PART NO	REMARK
1	DVD 5 1/4" 8X 12.7mm	85-7078X-T02	SD-C2502 (TOSHIBA)
2	SCREW M2.5*3L B NI ICT NY	35-41125-3RA	
3	FPC CABLE FOR CD-ROM V1.0 LP300	43-P300Z-010	
4	CD-ROM BRACKET SUS LP300	33-P300Z-011	
5	SCREW M2*3L KI NI ICT NY	35-B1120-3RC	
6	CD-ROM TRAY(R) PC+ABS LP300	42-P303Z-011	
7	TOSHIBA DVD BEZEL MODULE	39-P227V-024	

CD-RW Drive (LP300)





ITEM	PART NAME	PART NO	REMARK
1	CD-RW 5 1/4" 8X 12.7mm	85-8078X-K00	UJDA330CL-Z(KME)
2	SCREW M2.5*3L B NI ICT NY	35-41125-3RA	
3	FPC CABLE FOR CD-ROM V1.0 LP300	43-P300Z-010	
4	CD-ROM BRACKET SUS LP300	33-P300Z-011	
5	SCREW M2*3L KI NI ICT NY	35-B1120-3RC	
6	CD-ROM TRAY(R) PC+ABS LP300	42-P303Z-011	
7	CD-RW BEZEL MODULE 8X	42-P227W-020	UJDA330CL-Z(KME)

Figure 1 - 9
CD-RW Drive (LP300)

Appendix B:Schematic Diagrams

This appendix has circuit diagrams of the systems PCB's:

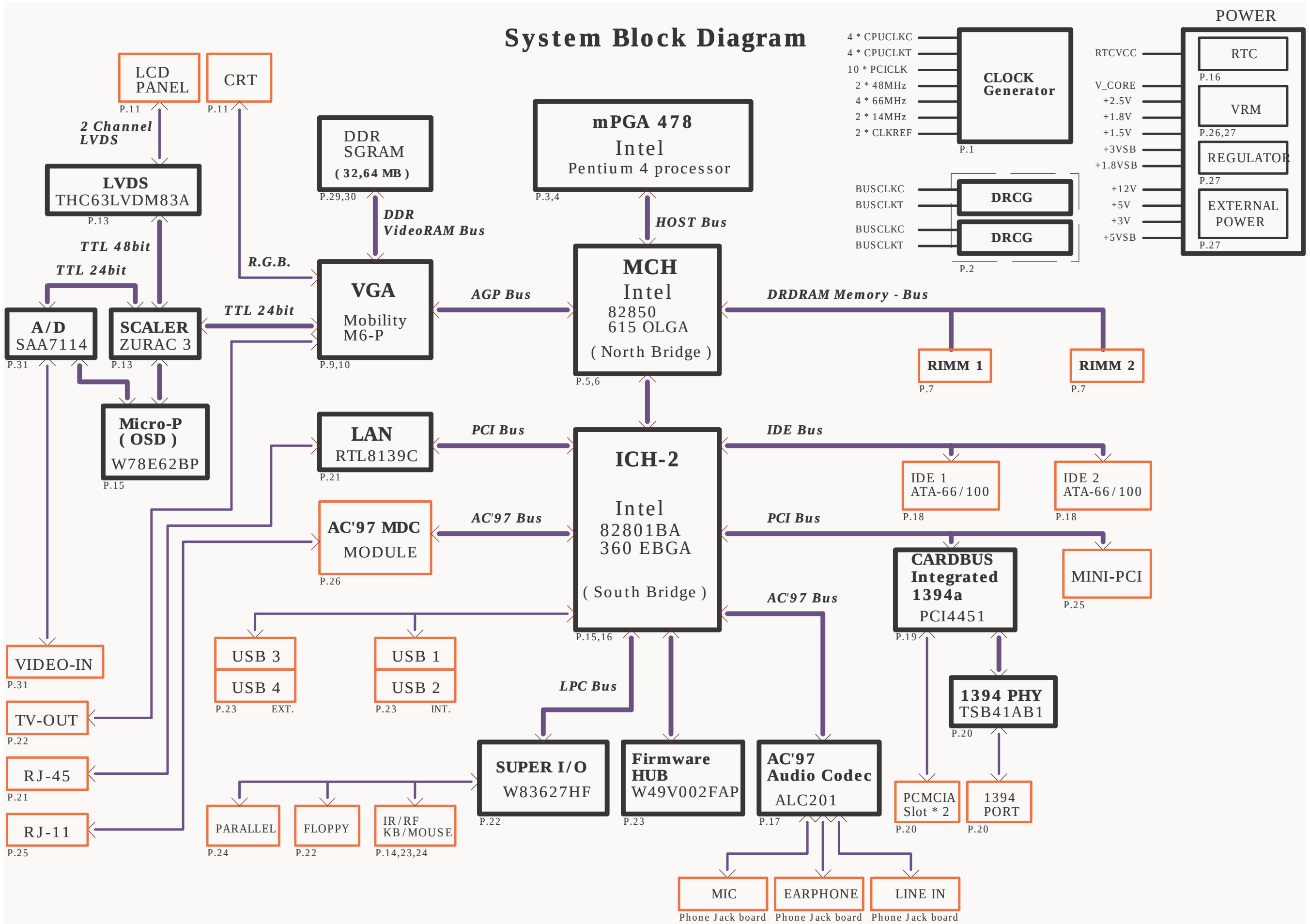
Printed Circuit Board	**Part No. of the Latest Version**
System Board	71-P3000-004A
External USB Board	71-P3003-002
LED Board	71-P3004-004
Inverter Board	71-P300R-005

The following table indicates where to find the appropriate schematic diagram.

Table 1 - 1
Schematic Diagram

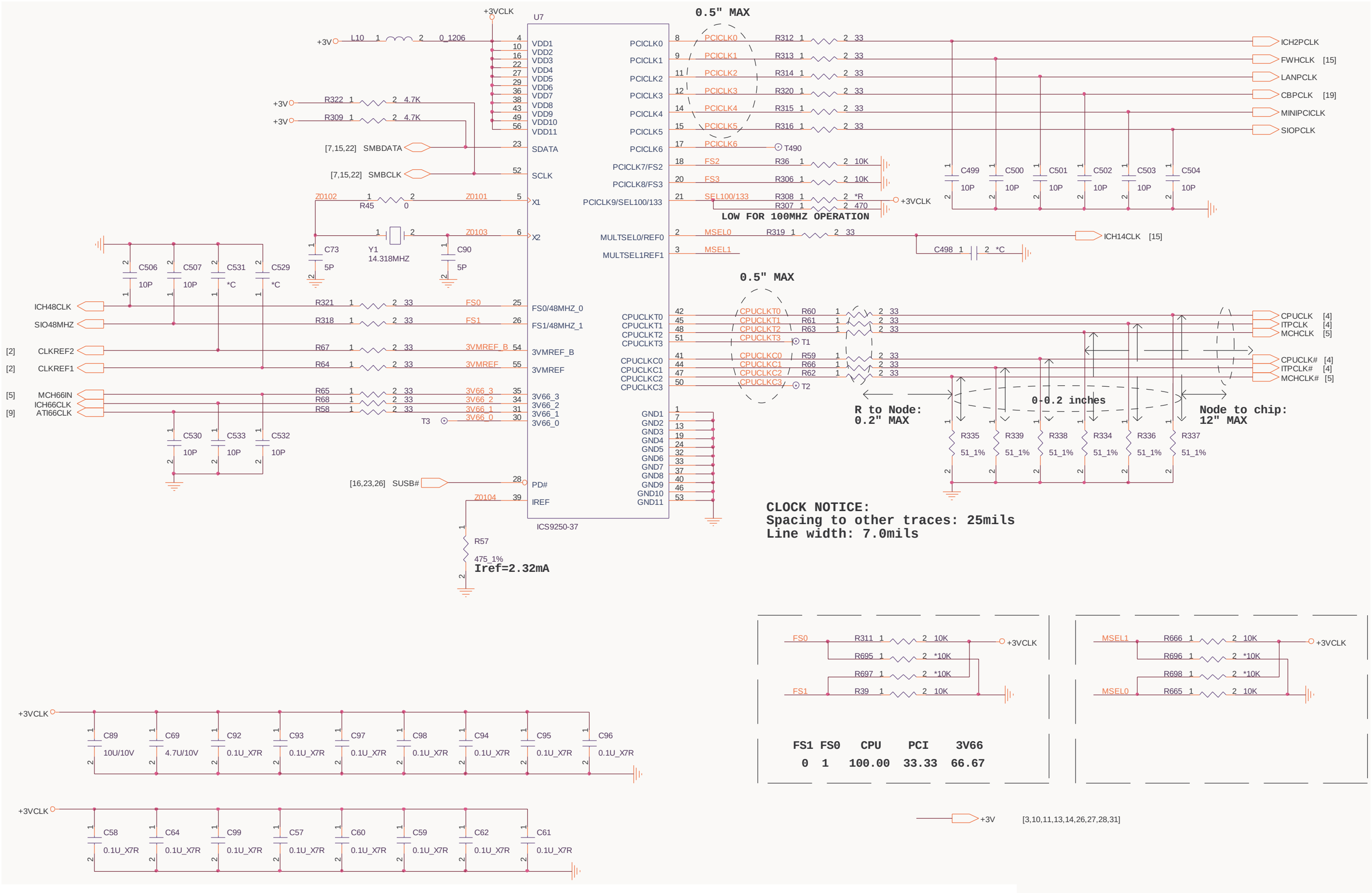
System Block Diagram

Sheet 1 of 32
System Block
Diagram



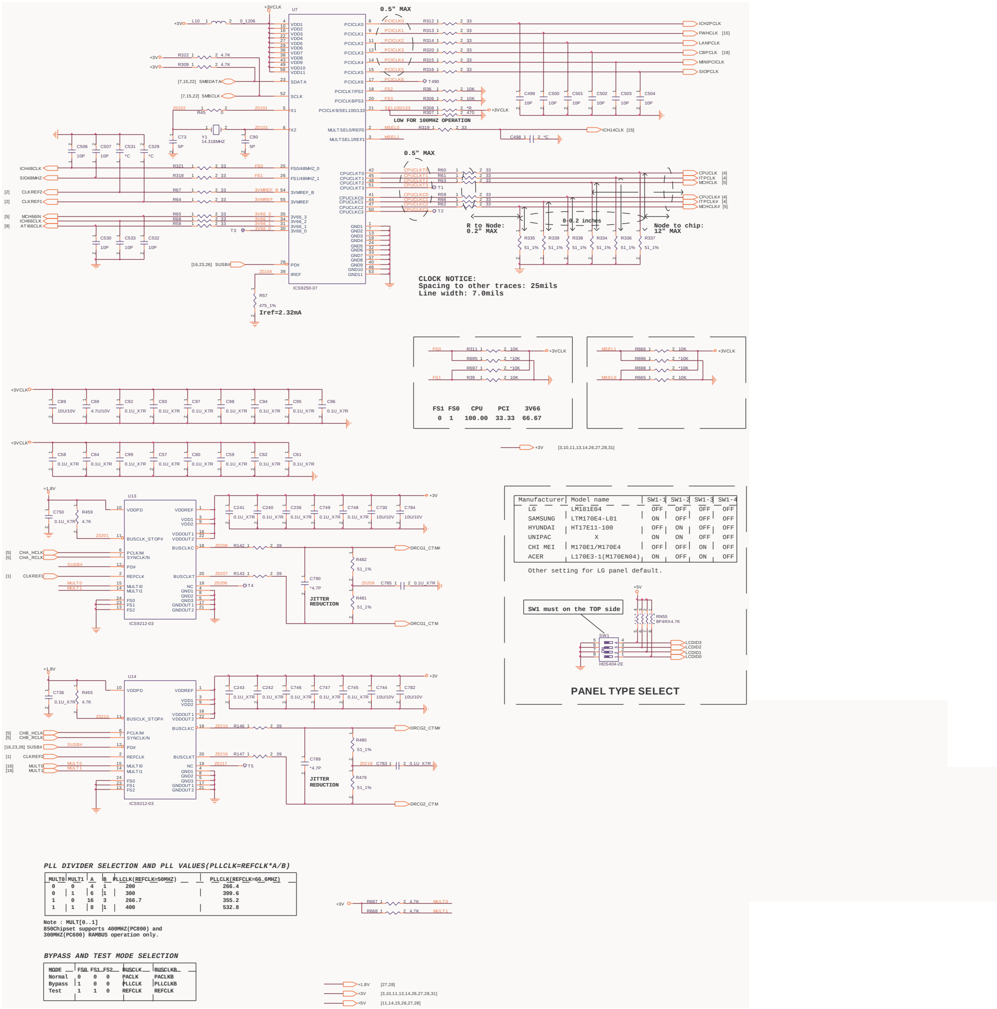
Clock Generator

Sheet 2 of 32
CLK GEN



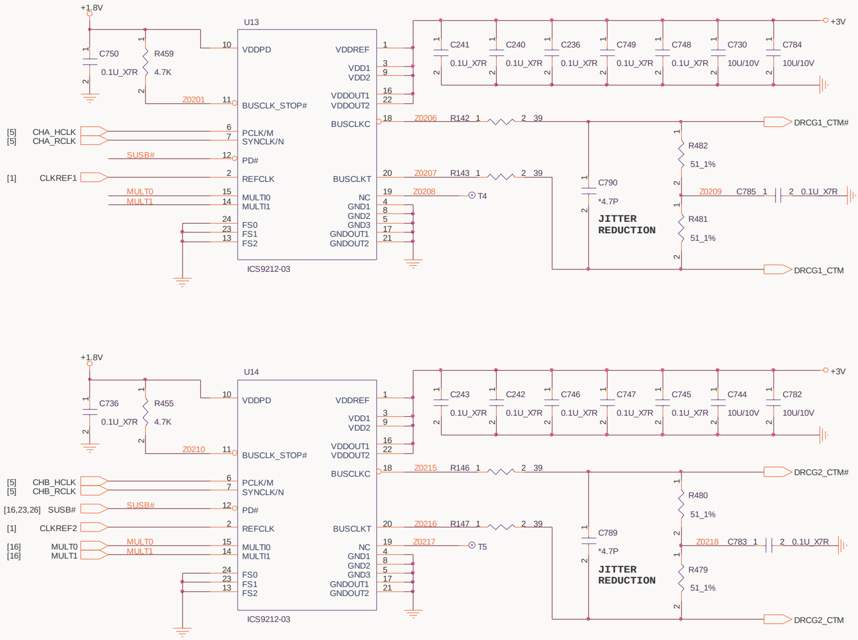
DRCG Panel Type

Sheet 3 of 32
DRCG - Panel Type



CPU (P4 mPGA 478) - 1 of 2

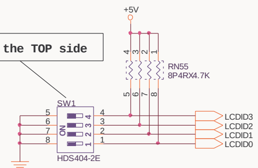
Sheet 4 of 32
CPU (P4 mPGA478)
1 of 2



Manufacturer	Model name	SW1-1	SW1-2	SW1-3	SW1-4
LG	LM181E04	OFF	OFF	OFF	OFF
SAMSUNG	LTM170E4-L01	ON	OFF	OFF	OFF
HYUNDAI	HT17E11-100	OFF	ON	OFF	OFF
UNIPAC	X	ON	ON	OFF	OFF
CHI MEI	M170E1/M170E4	OFF	OFF	ON	OFF
ACER	L170E3-1(M170EN04)	ON	OFF	ON	OFF

Other setting for LG panel default.

SW1 must on the TOP side

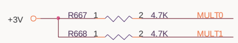


PANEL TYPE SELECT

PLL DIVIDER SELECTION AND PLL VALUES(PLLCLK=REFCLK*A/B)

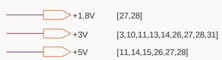
MULT0	MULT1	A	B	PLLCLK(REFCLK=50MHZ)	PLLCLK(REFCLK=66.6MHZ)
0	0	4	1	200	266.4
0	1	6	1	300	399.6
1	0	16	3	266.7	355.2
1	1	8	1	400	532.8

Note : MULT[0..1]
850Chipset supports 400MHZ(PC800) and
300MHZ(PC600) RAMBUS operation only.



BYPASS AND TEST MODE SELECTION

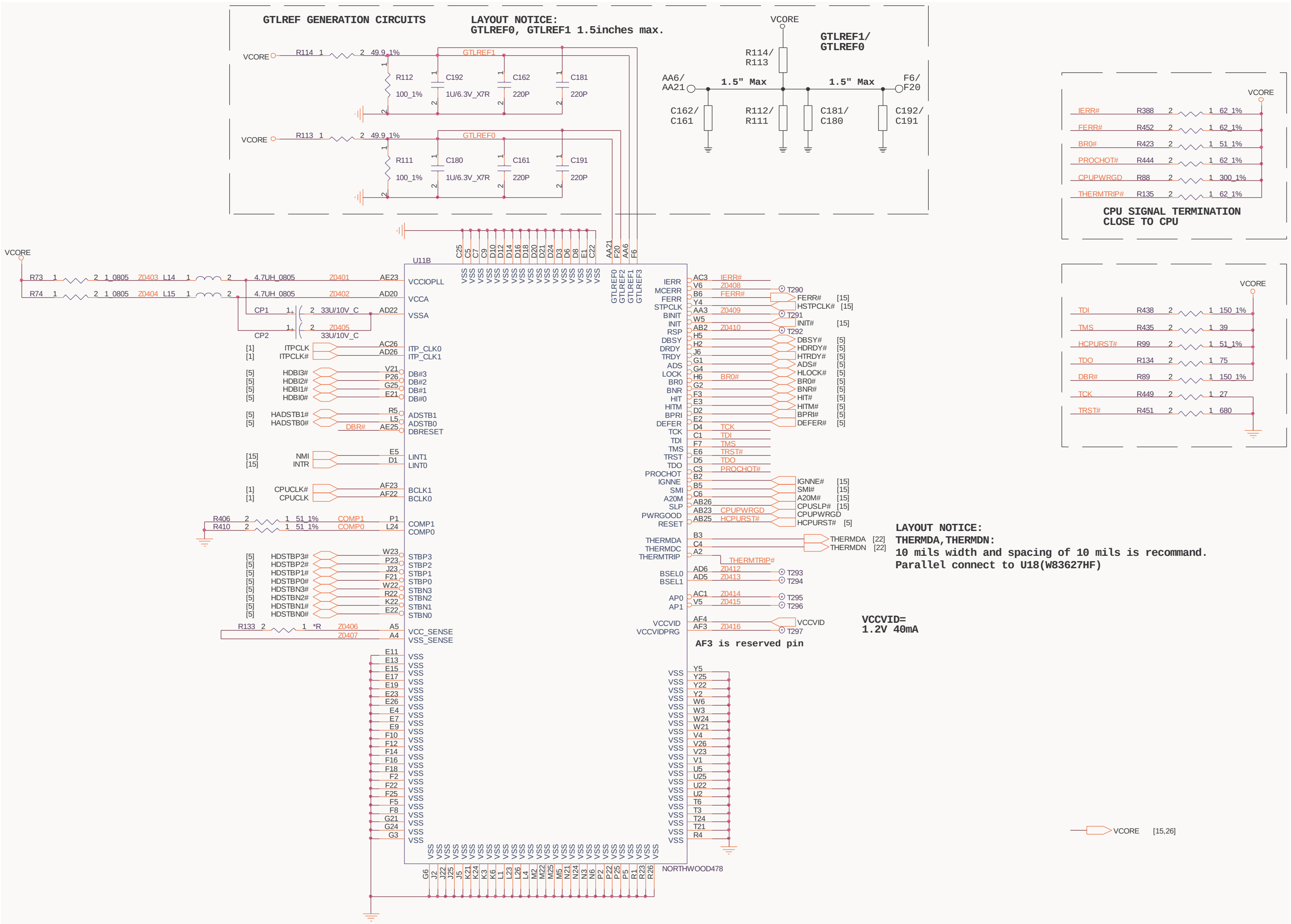
MODE	FS0	FS1	FS2	BUSCLK	BUSCLKB
Normal	0	0	0	PACLK	PACLKB
Bypass	1	0	0	PLLCLK	PLLCLKB
Test	1	1	0	REFCLK	REFCLK



Schematic Diagrams

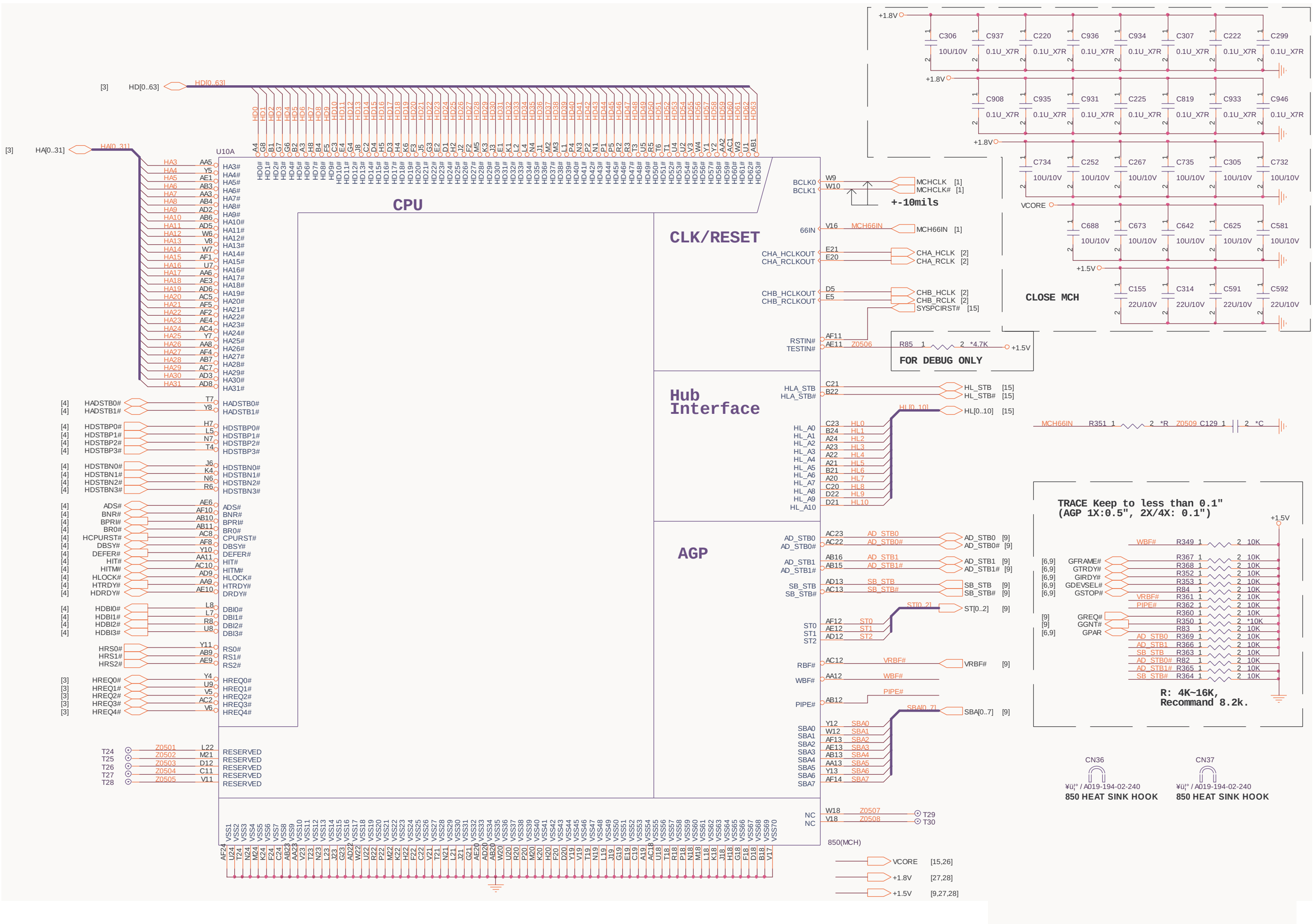
CPU (P4 mPGA478) - 2 of 2

Sheet 5 of 32
CPU (P4 mPGA478)
2 of 2



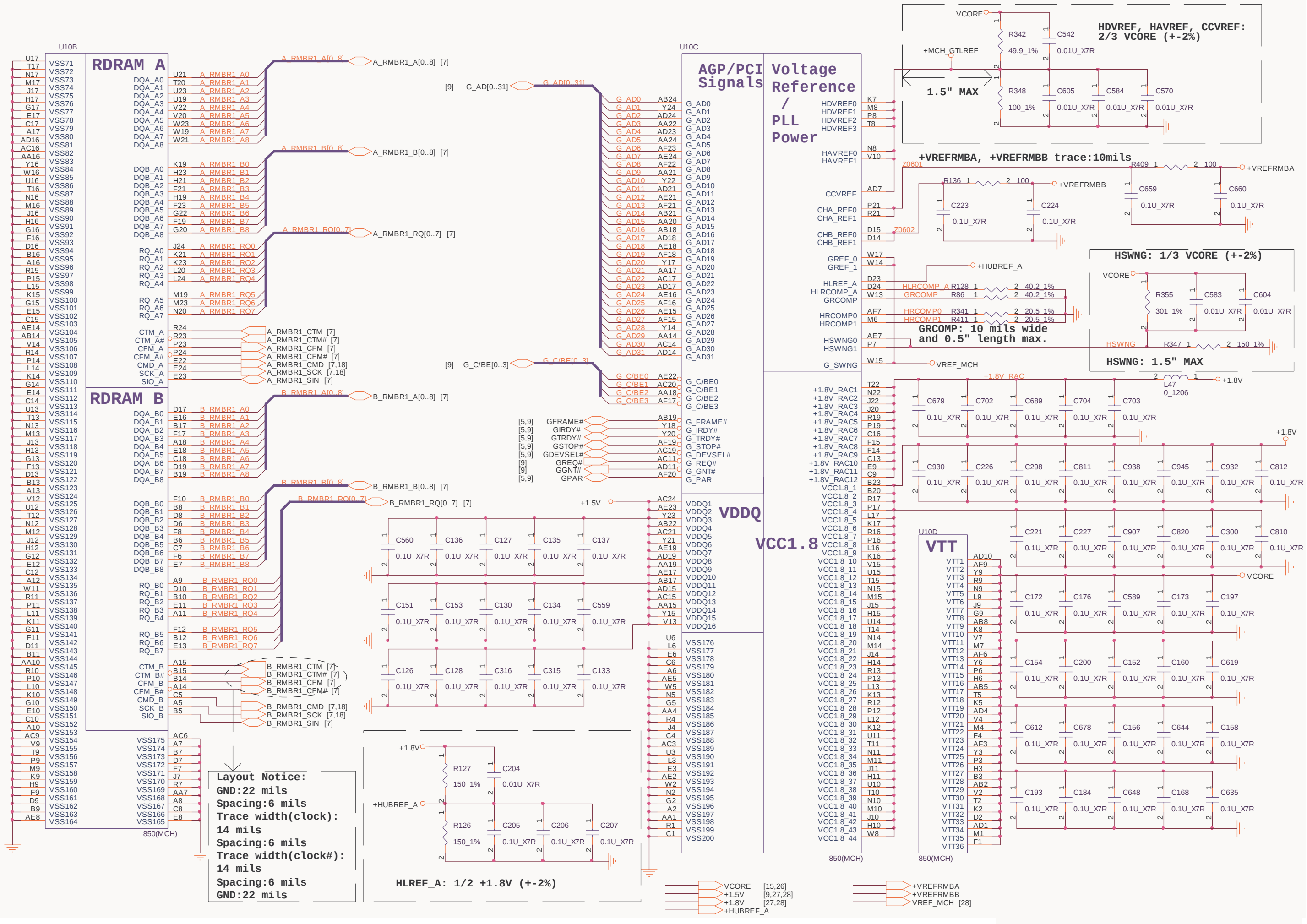
MCH (CPU, HUB, AGP) - 1 of 2

Sheet 6 of 32
MCH
(CPU, HUB, AGP)
1 of 2



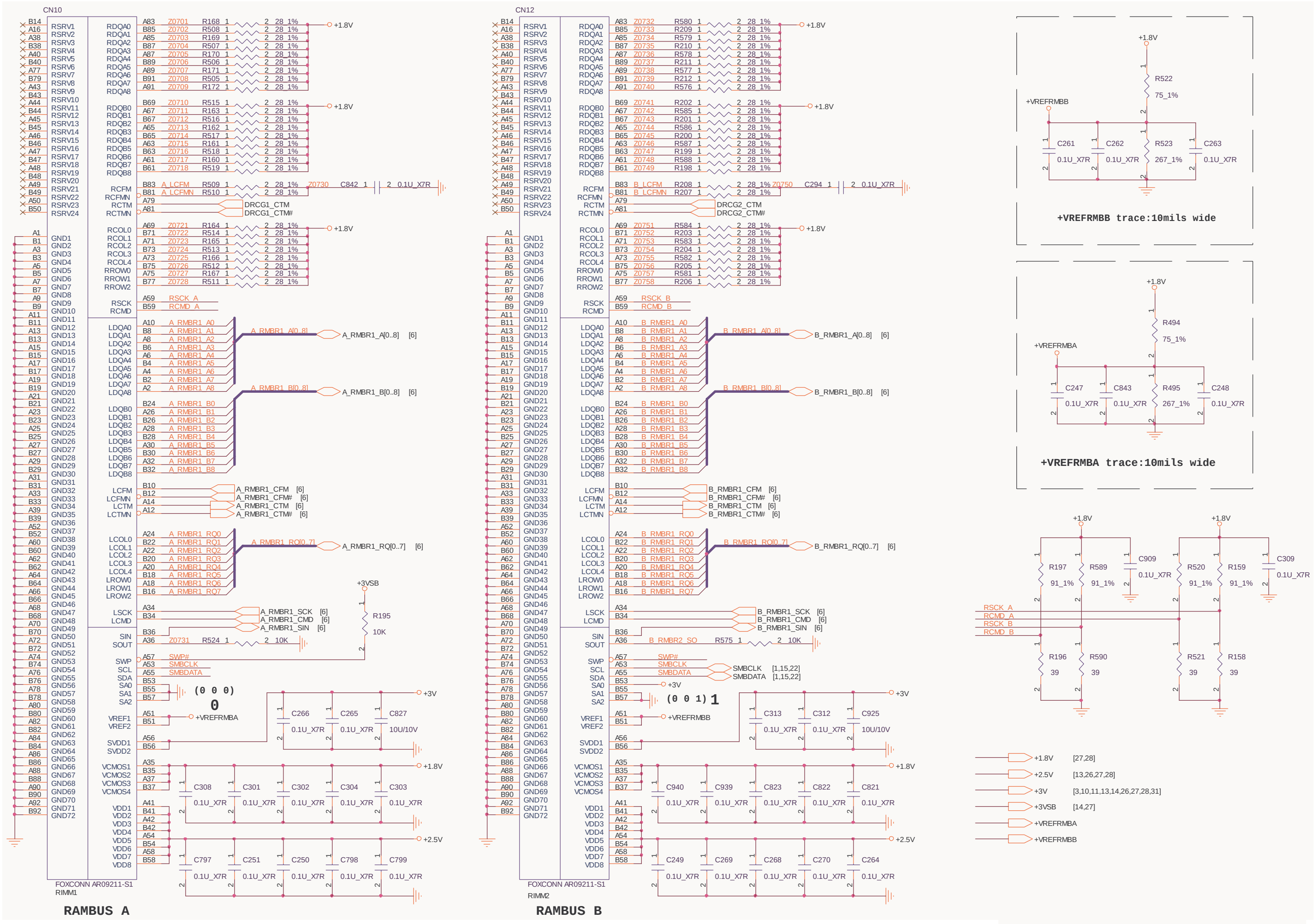
MCH (RDRAM, PCI) - 2 of 2

Sheet 7 of 32
MCH (RDRAM, PCI)
2 of 2



RAMBUS A,B

Sheet 8 of 32
RAMBUS A,B



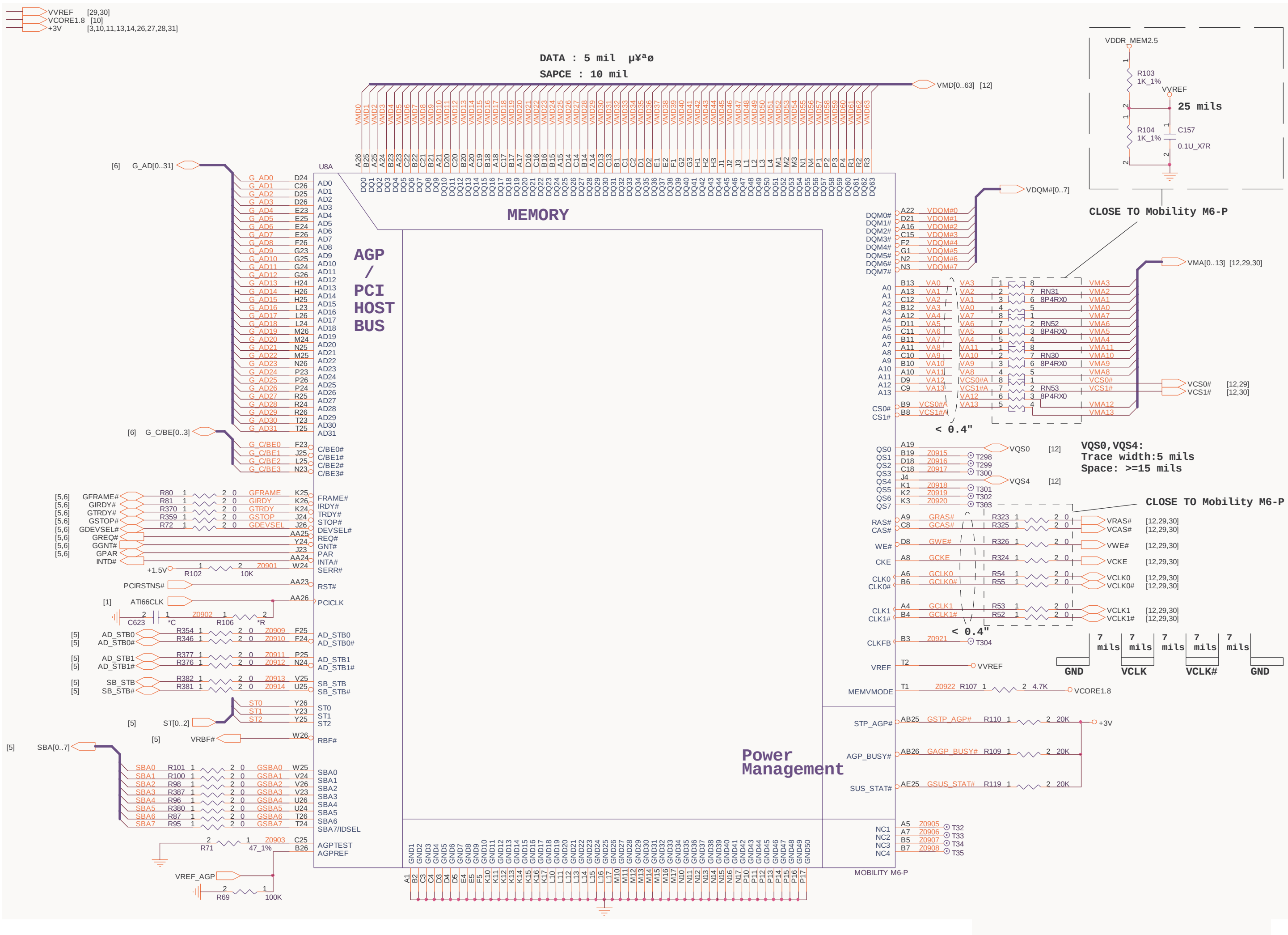
CPU Decoupling

Sheet 9 of 32
CPU Decoupling



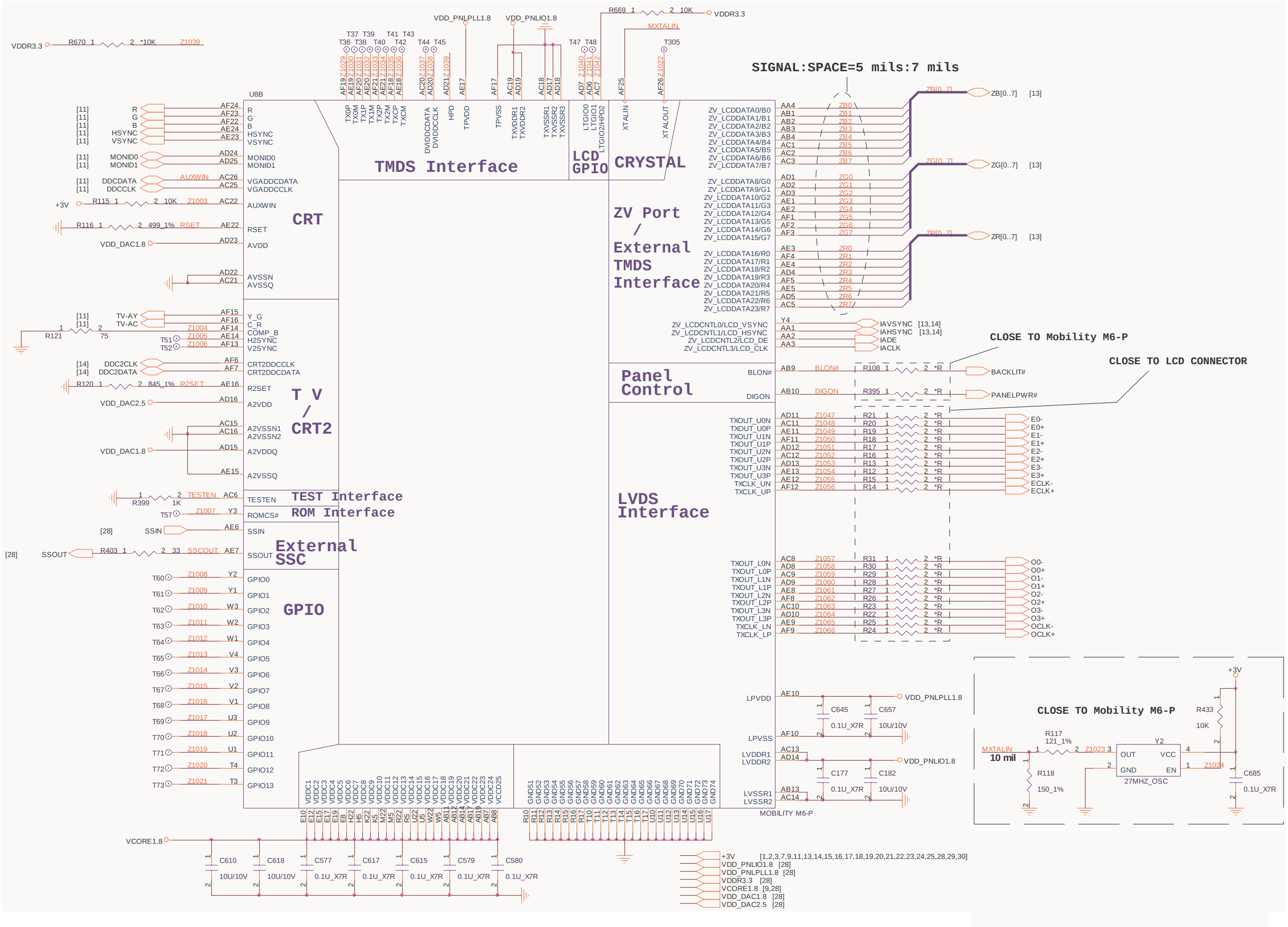
ATI Mobility M6 - 1 of 3

Sheet 10 of 32
ATI Mobility M6
1 of 3



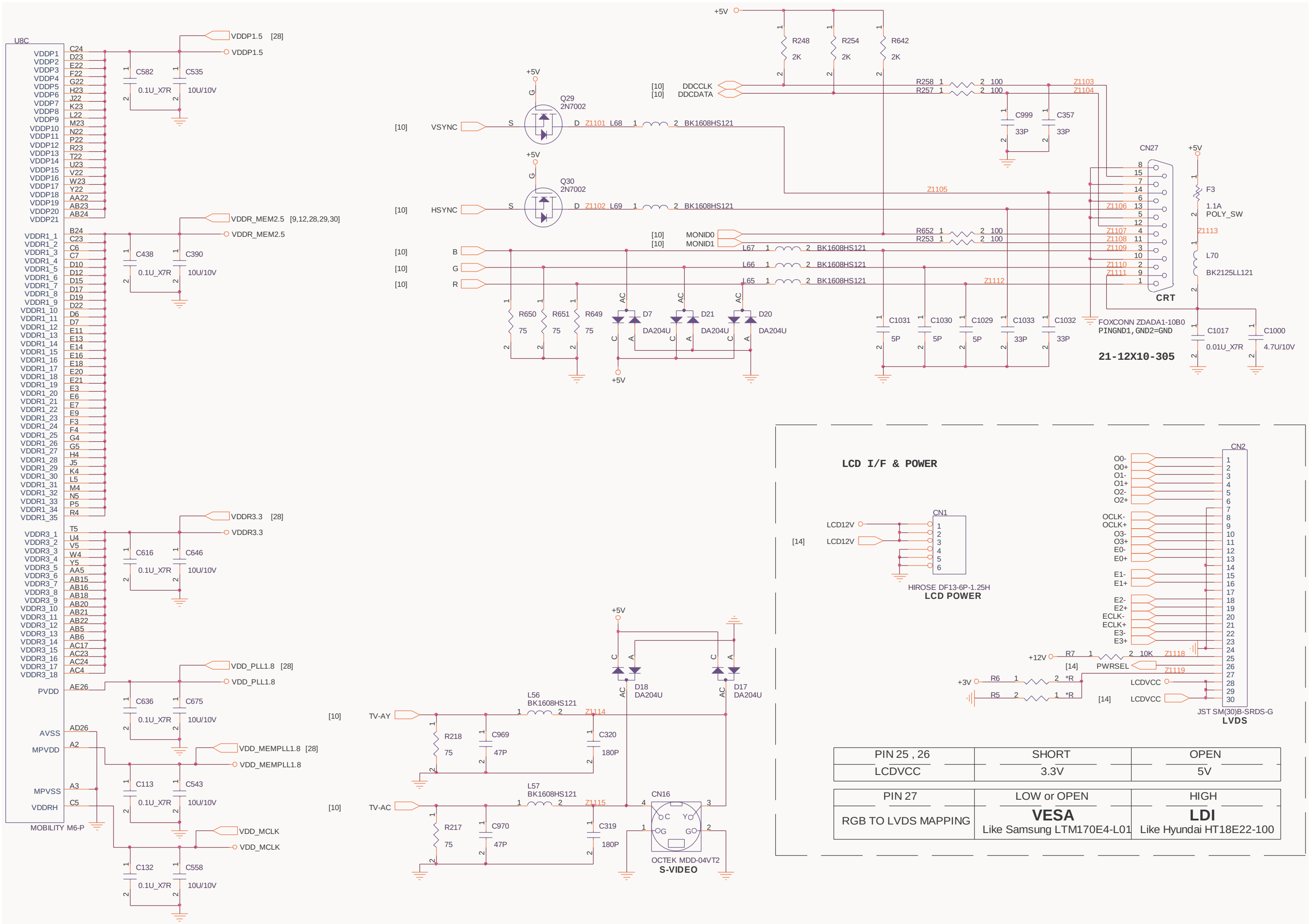
ATI Mobility M6 - 2 0f 3

Sheet 11 of 32
ATI Mobility M6
2 0f 3



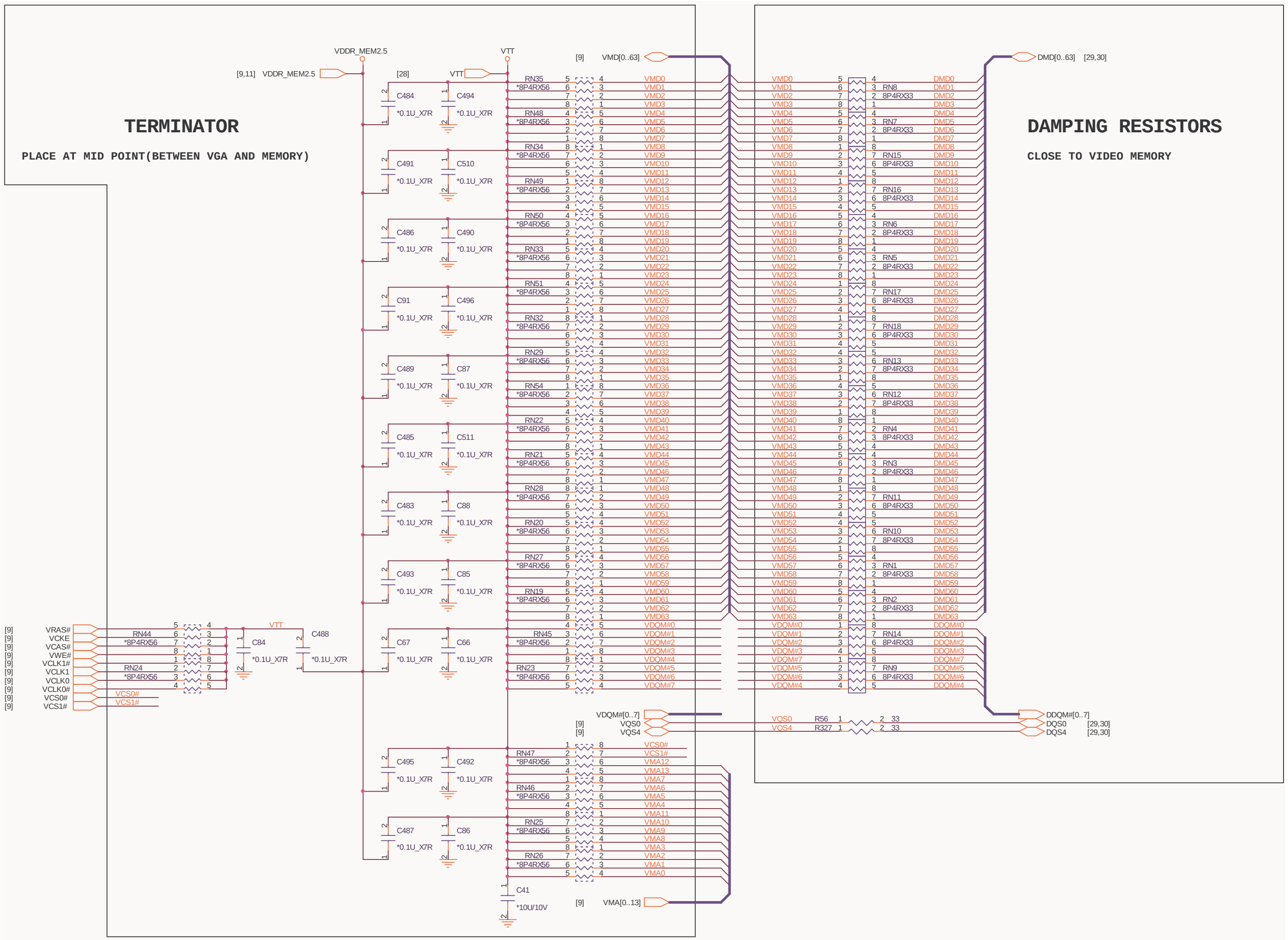
ATI Mobility M6 - 3 0f 3

Sheet 12 of 32
ATI Mobility M6
3 of 3



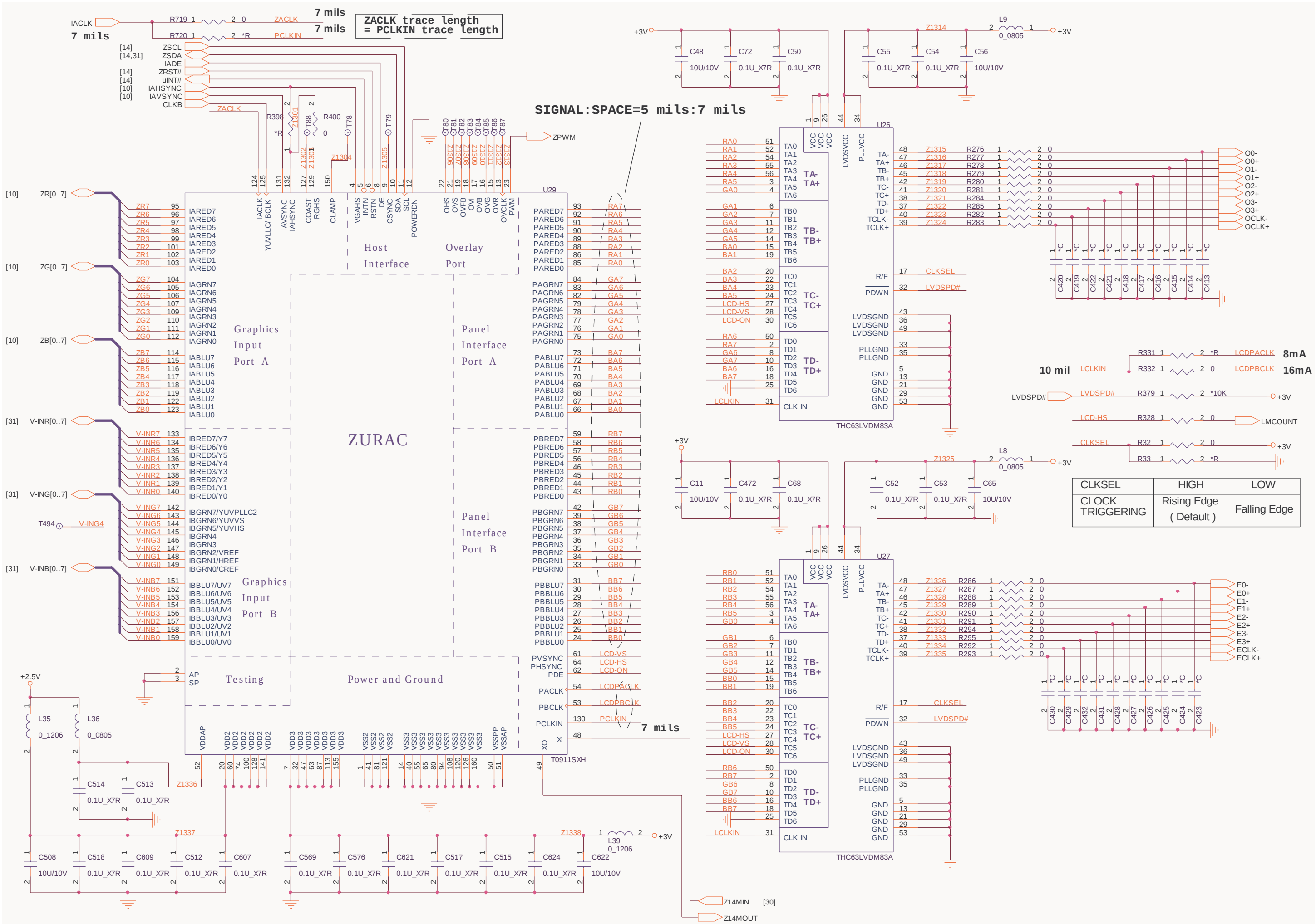
VRAM Terminator

Sheet 13 of 32
VRAM Terminator



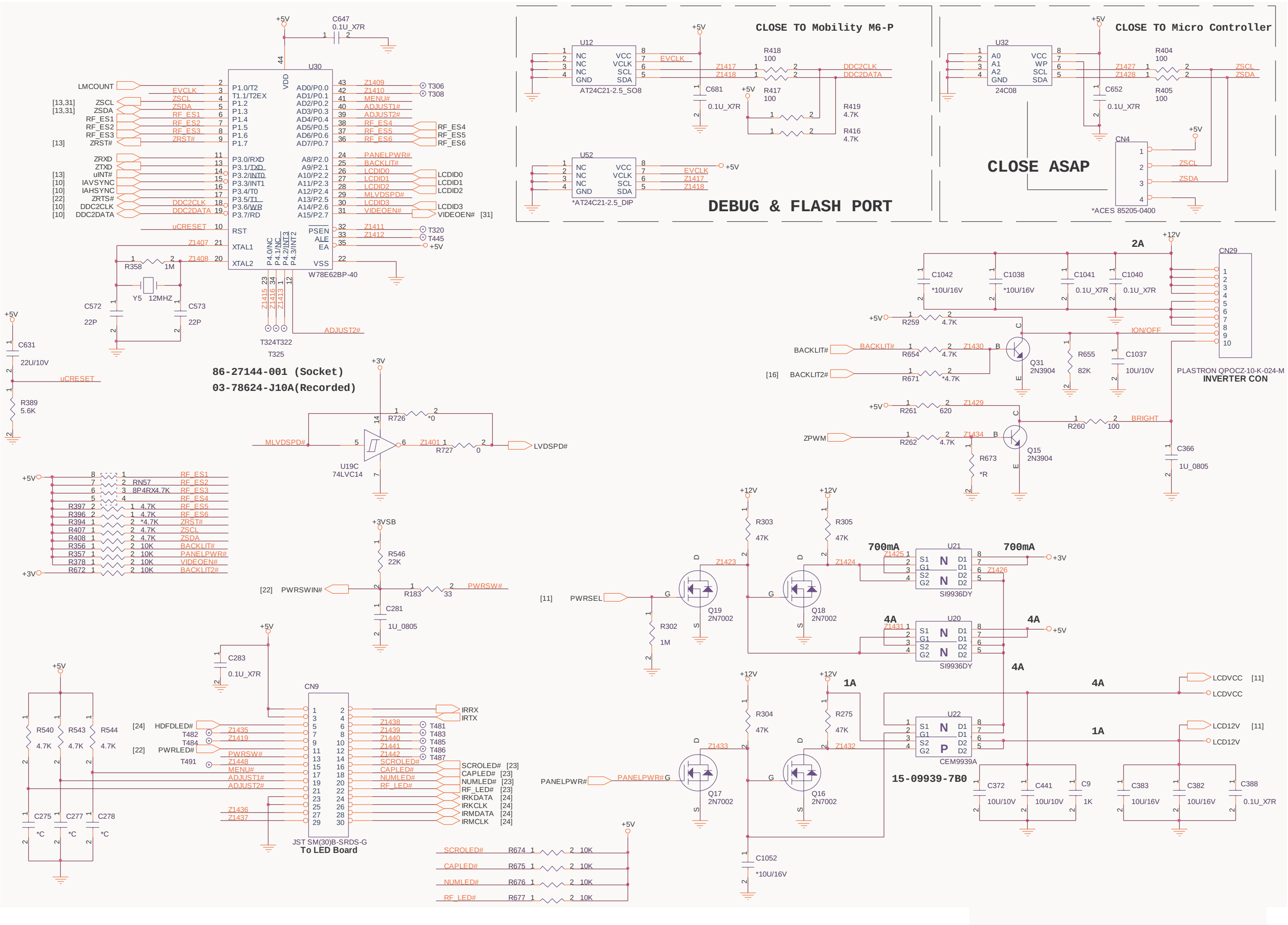
Z3, LVDS

Sheet 14 of 32
Z3, LVDS



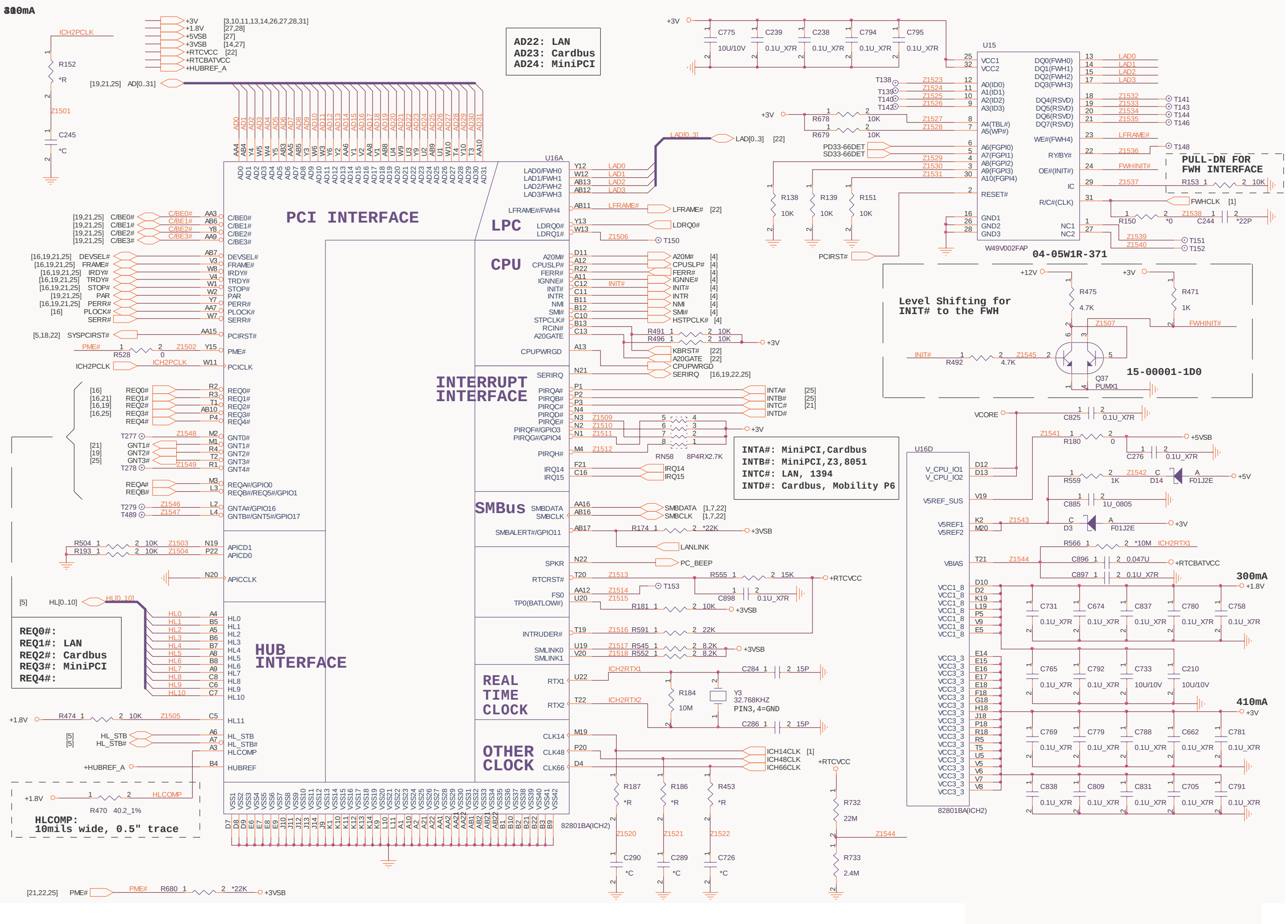
Micro-P, LCD PWR

Sheet 15 of 32
Micro-P, LCD PWR



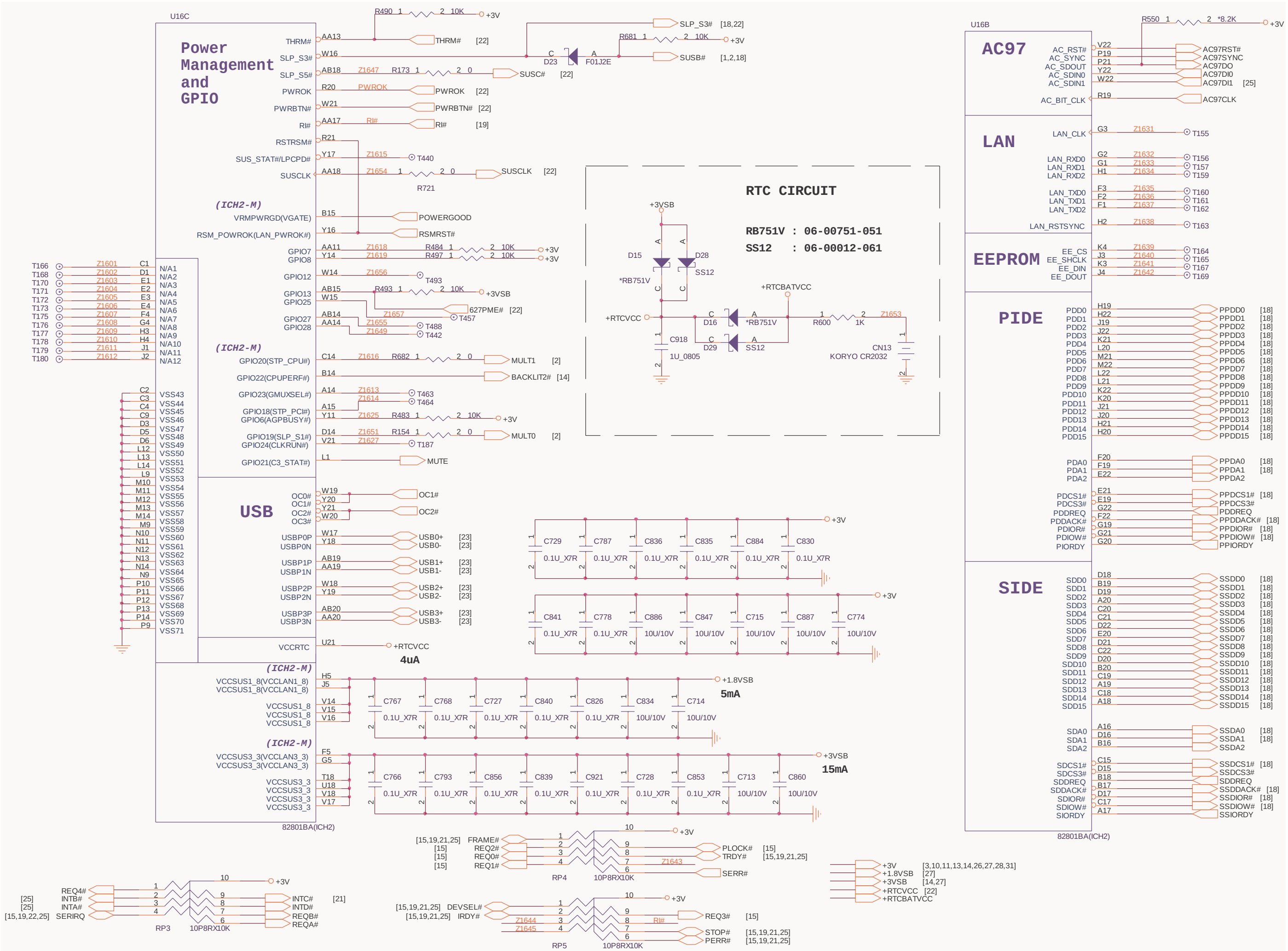
ICH2 - 1 of 2

Sheet 16 of 32
ICH2
1 of 2



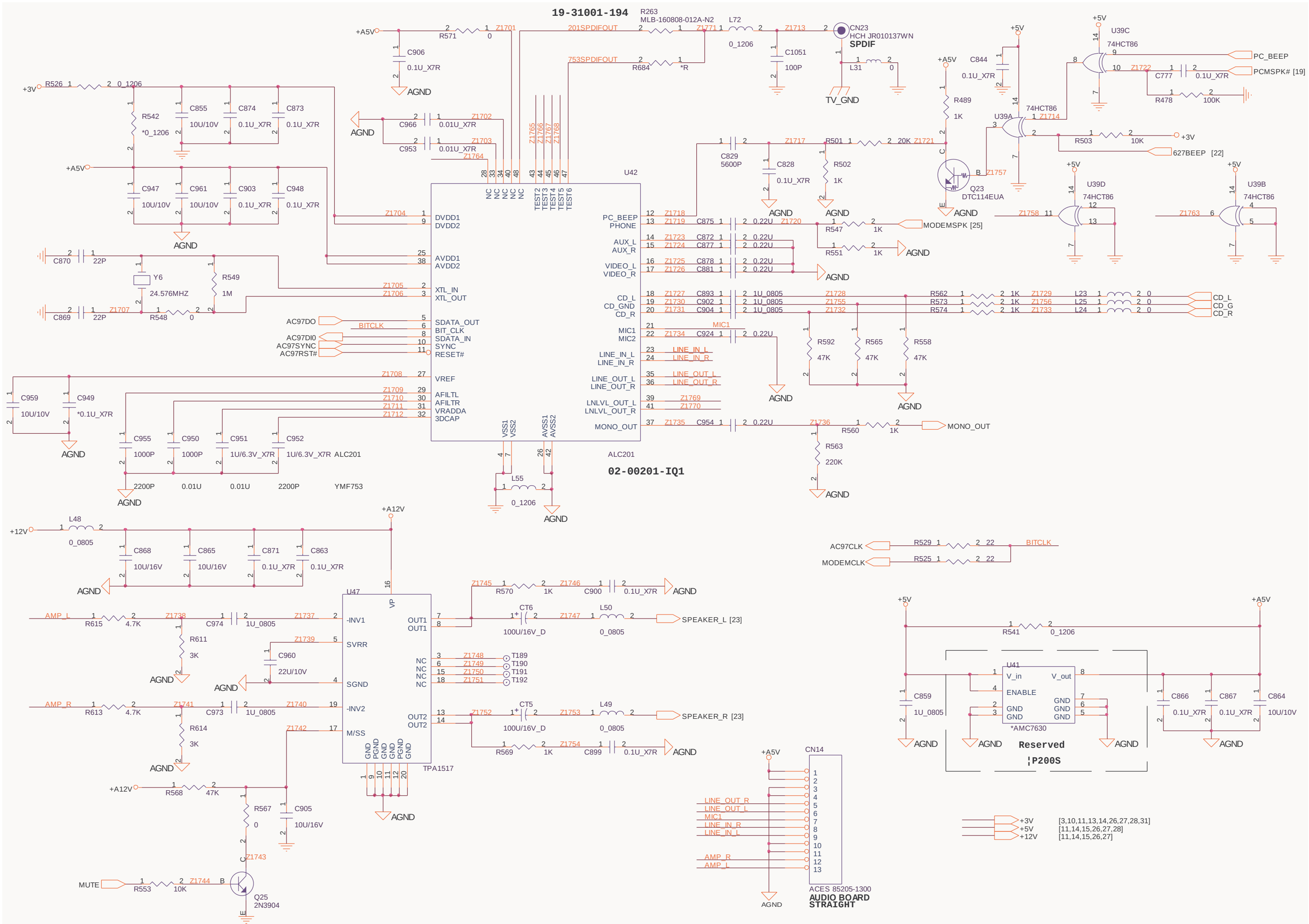
ICH2 - 2 of 2

Sheet 17 of 32
ICH2
2 of 2



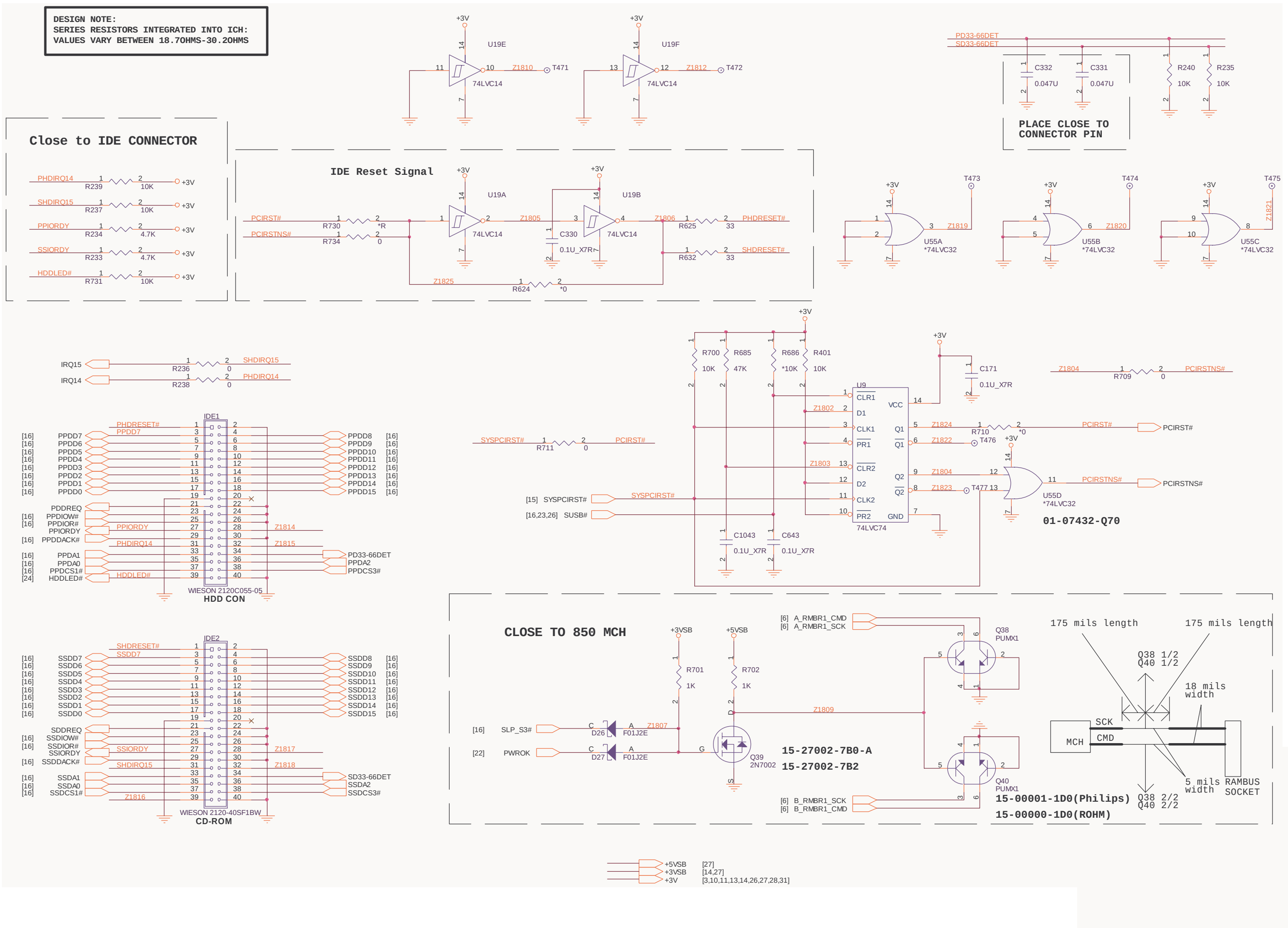
Audio Codec, AMP

Sheet 18 of 32
Audio Codec, AMP



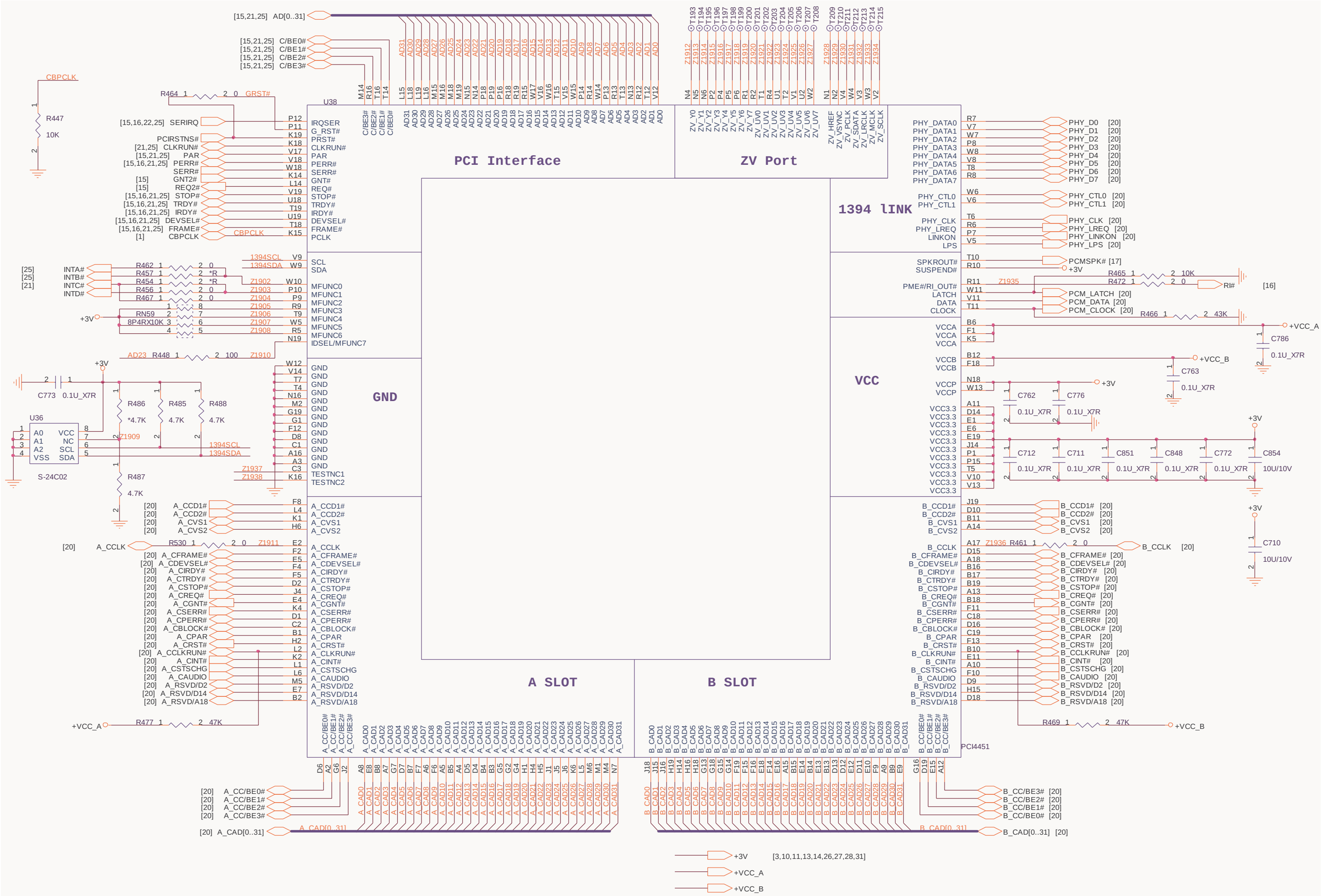
IDE, PCI Reset

Sheet 19 of 32
IDE, PCI Reset

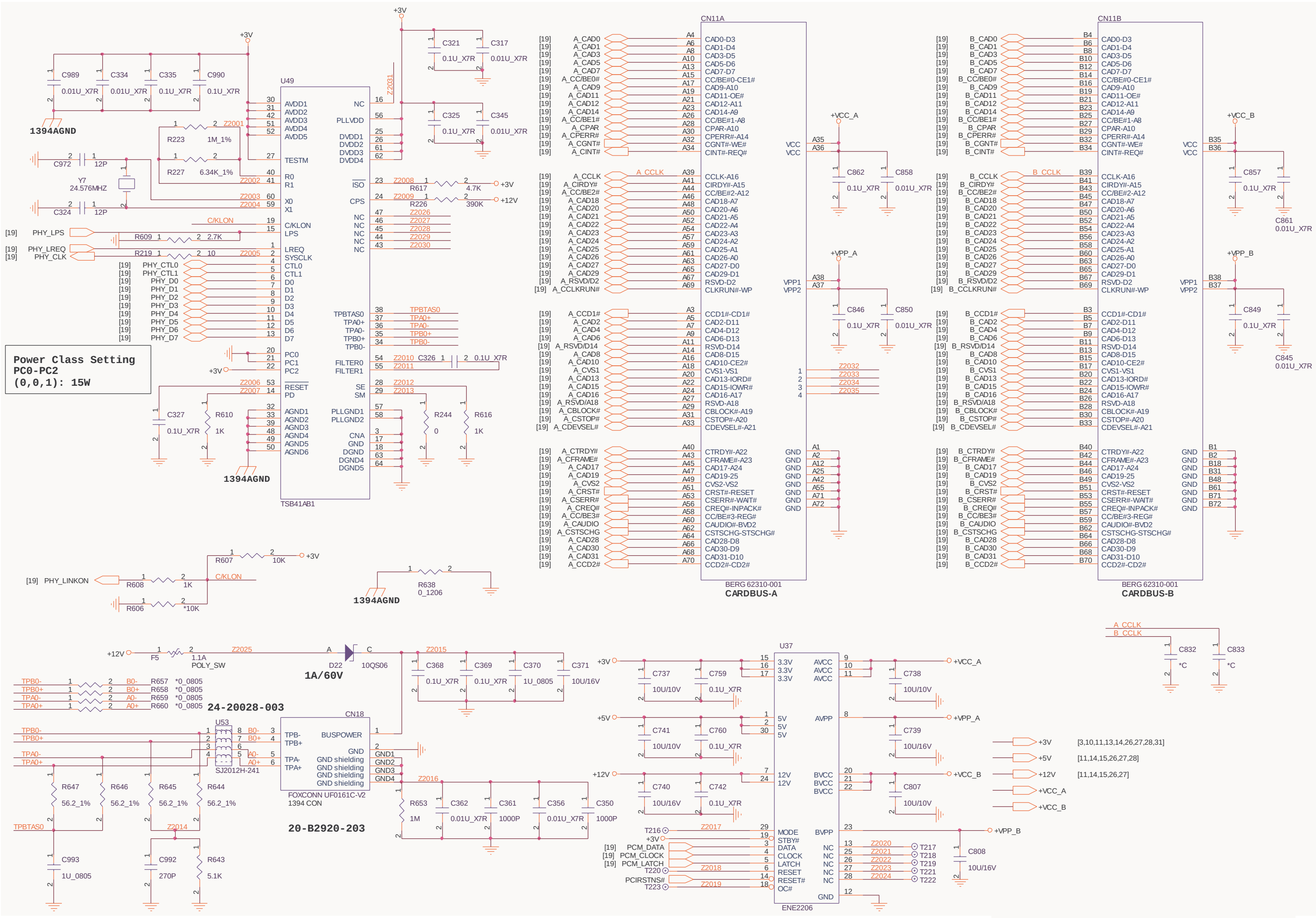


PCMCIA 1394

Sheet 20 of 32
PCMCIA 1394

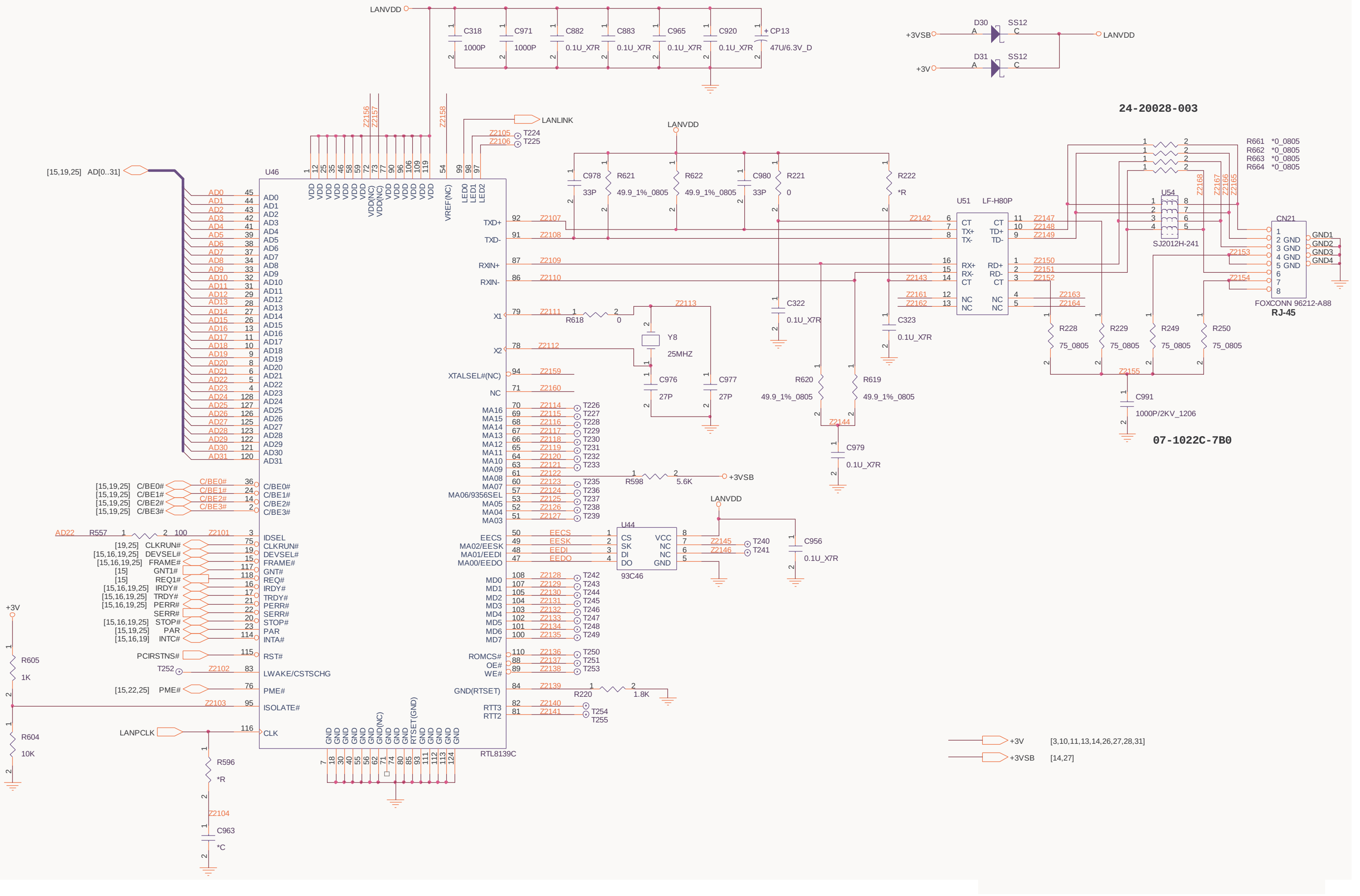


1394 PHY, PCMCIA Ejecter



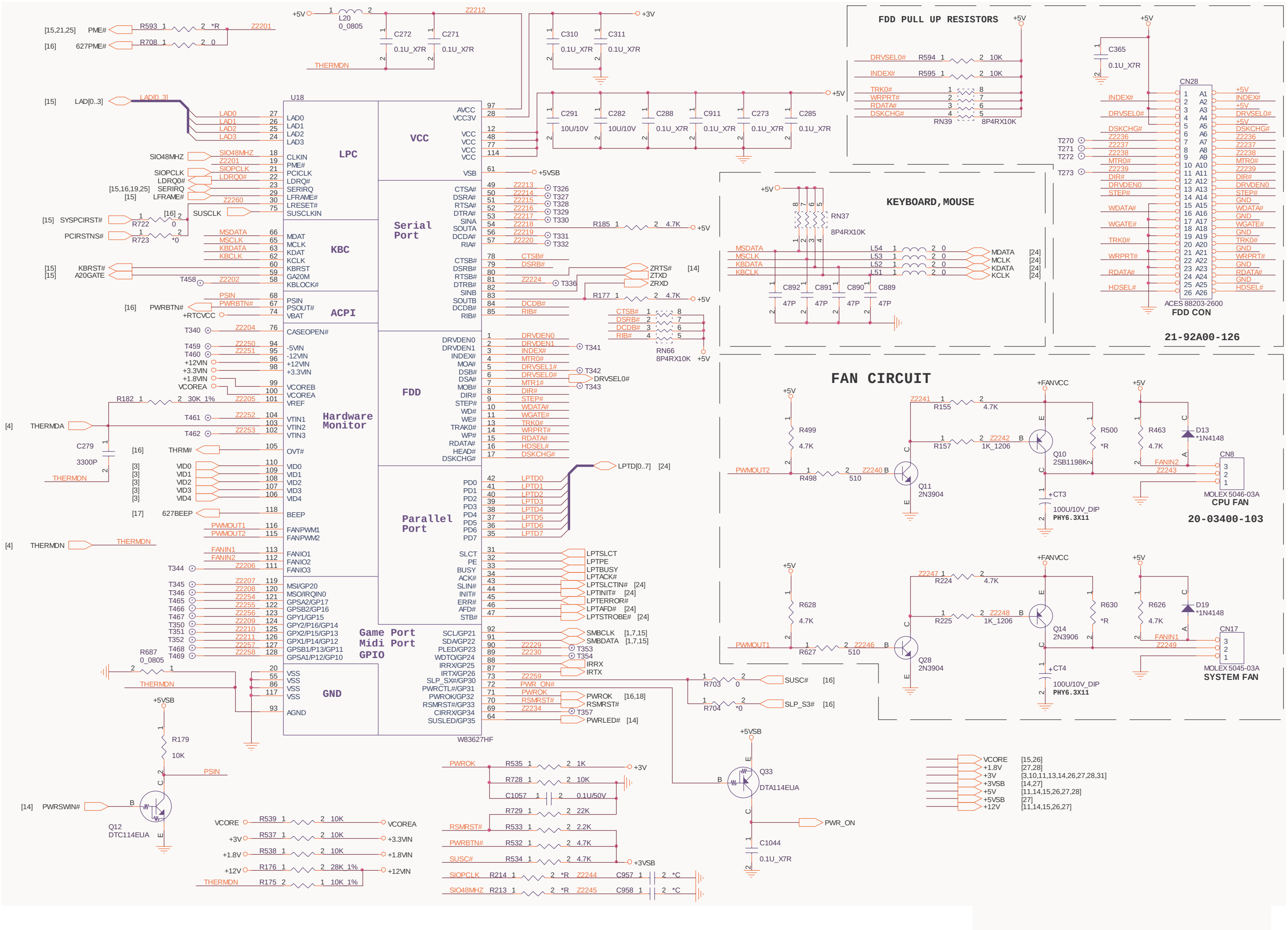
LAN 8139C

Sheet 22 of 32
LAN 8139C



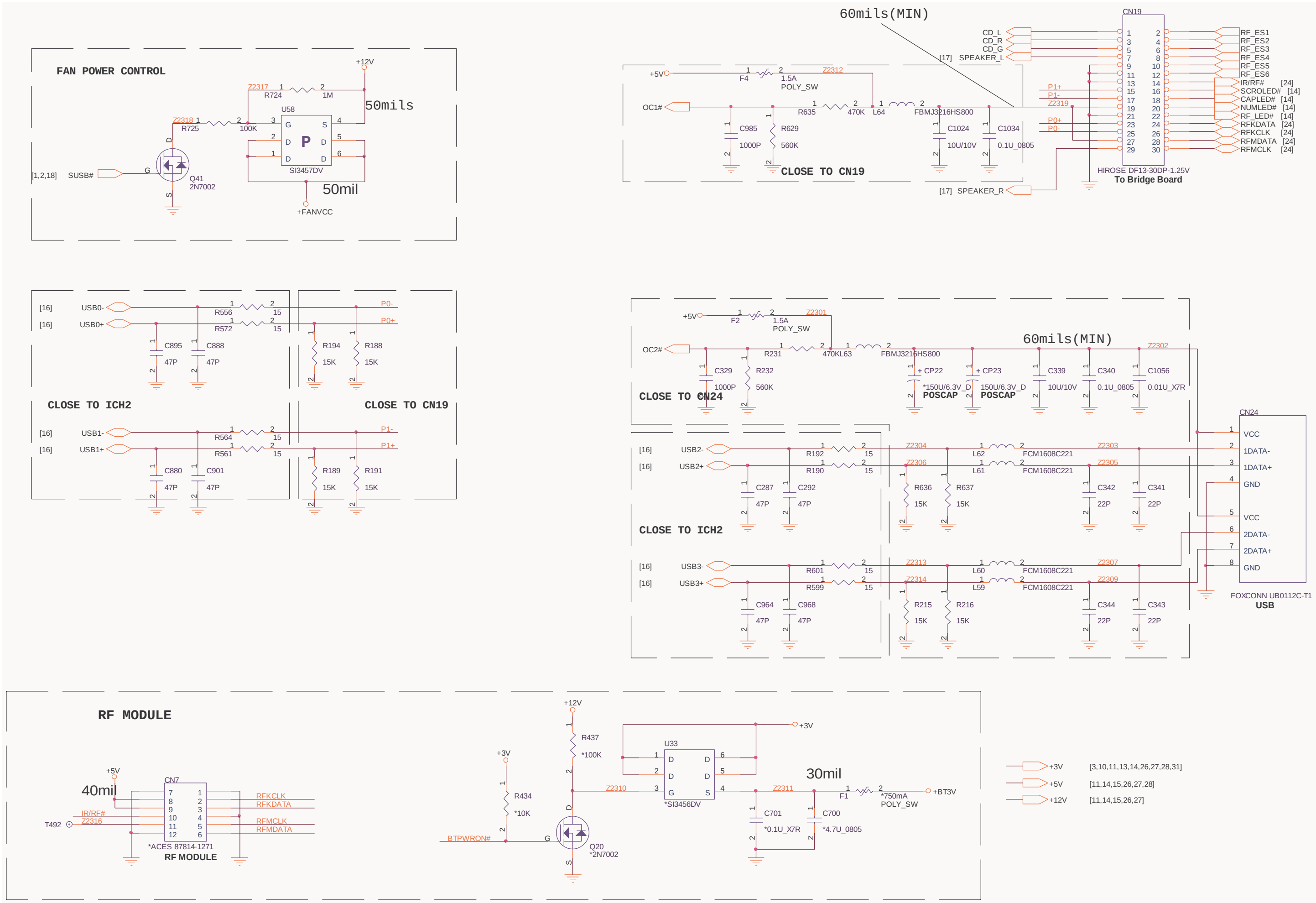
Super I/O

Sheet 23 of 32
Super I/O



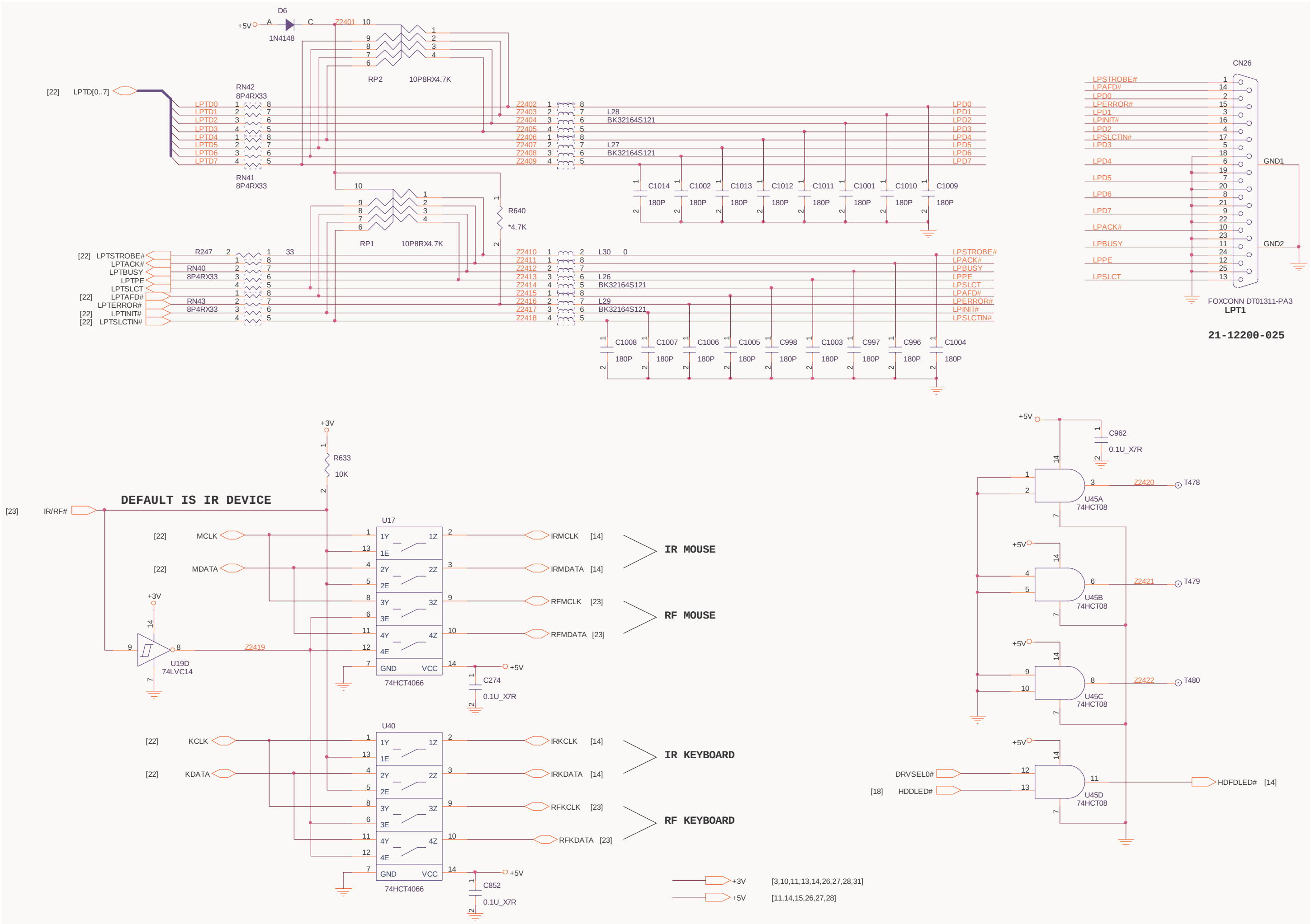
USB, Bluetooth

Sheet 24 of 32
USB, Bluetooth



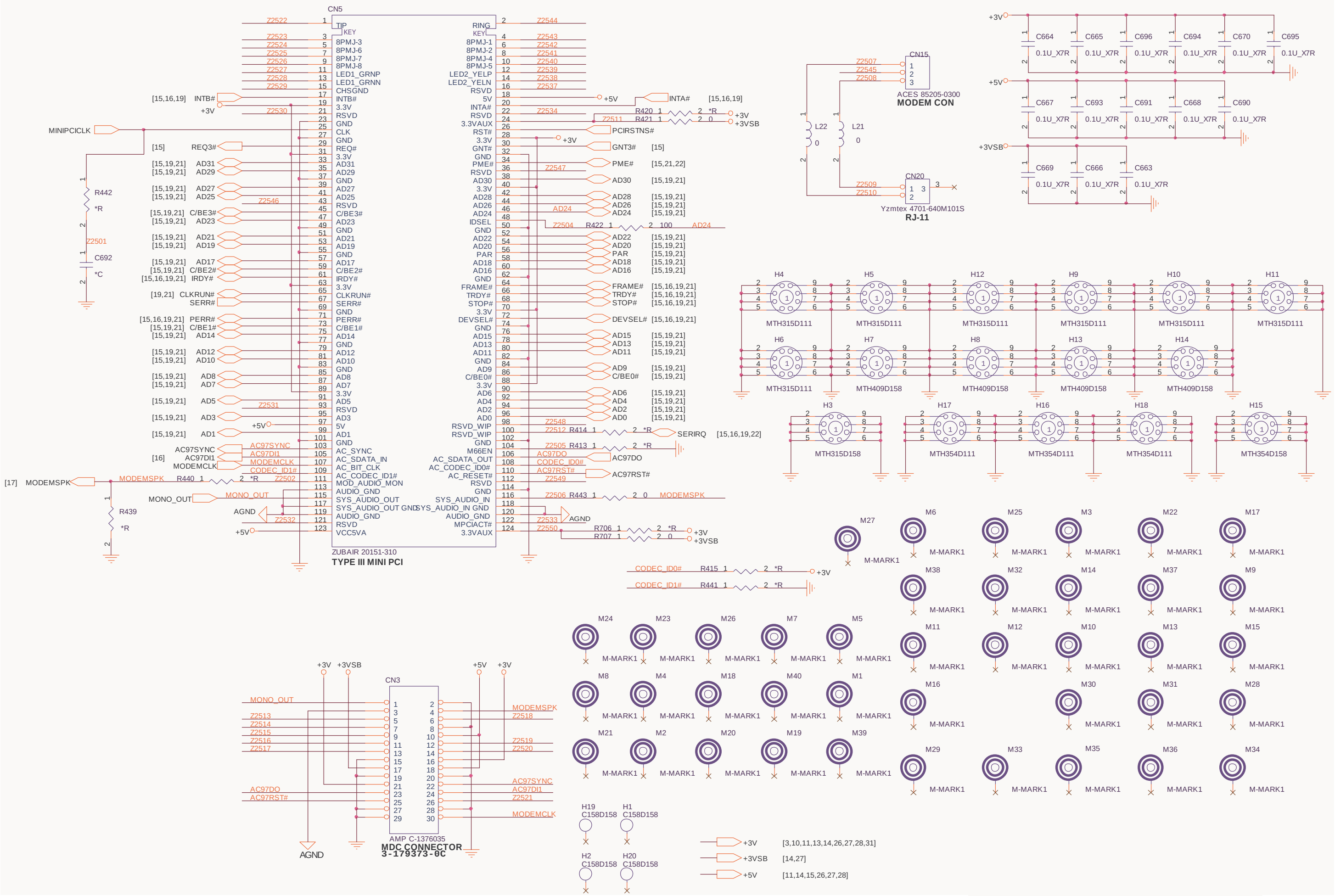
LPT, IR/RF

Sheet 25 of 32
LPT, IR/RF



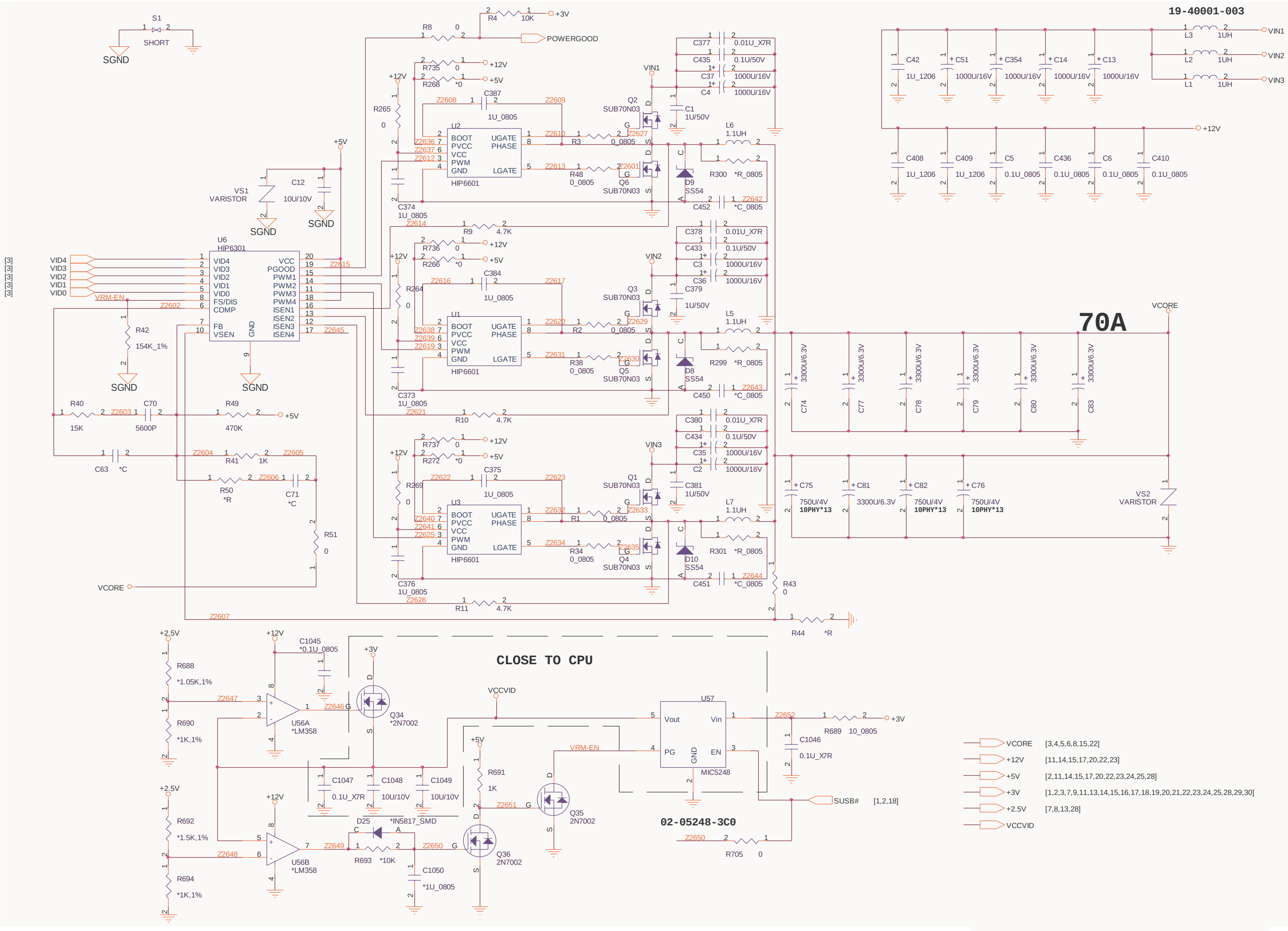
Mini PCI, MDC

Sheet 26 of 32
Mini PCI, MDC



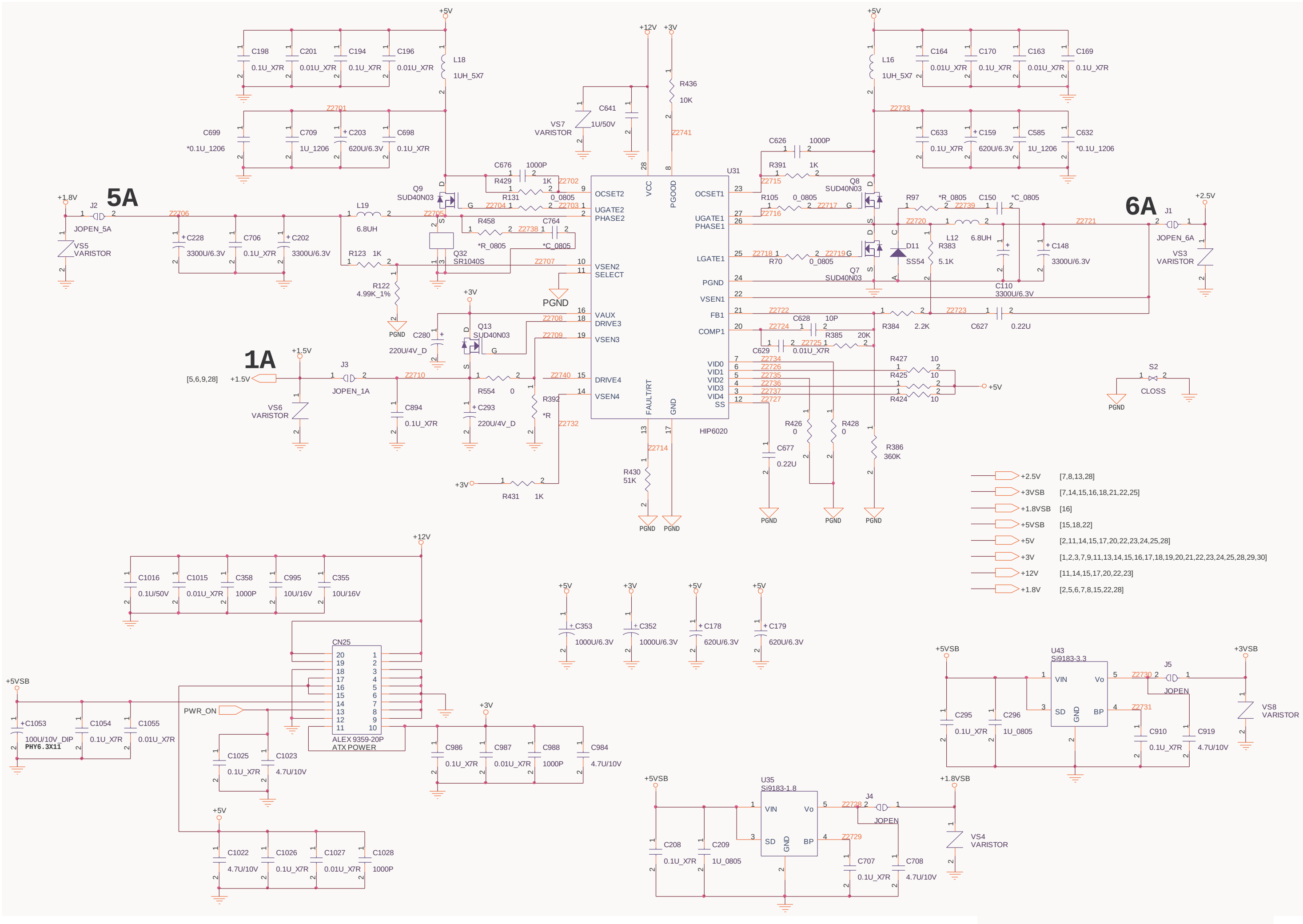
Power - 1 of 2

Sheet 27 of 32
Power
1 of 2



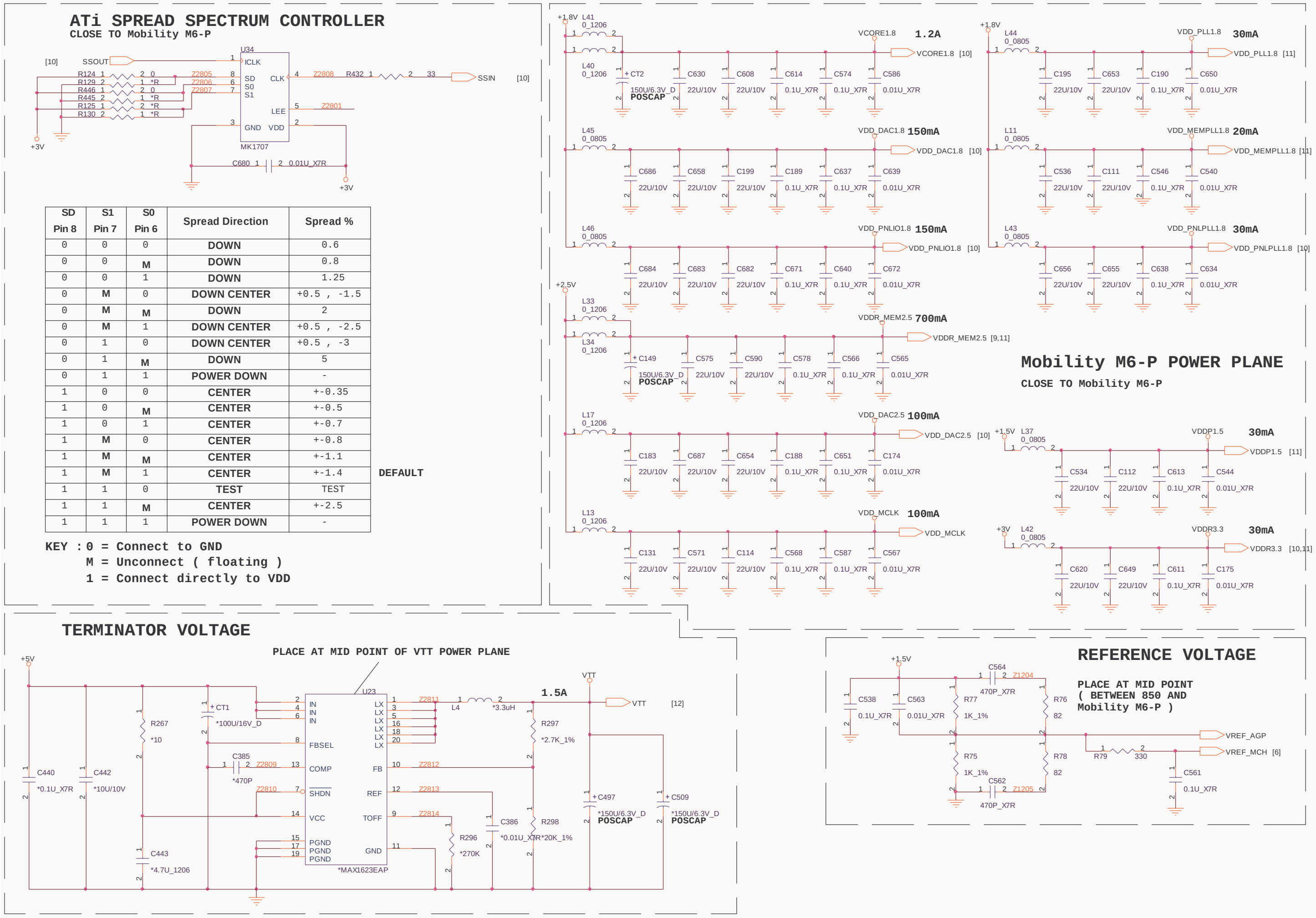
Power - 2 of 2

Sheet 28 of 32
Power
2 of 2



SSC, VGA Power

Sheet 29 of 32
SSC, VGA Power

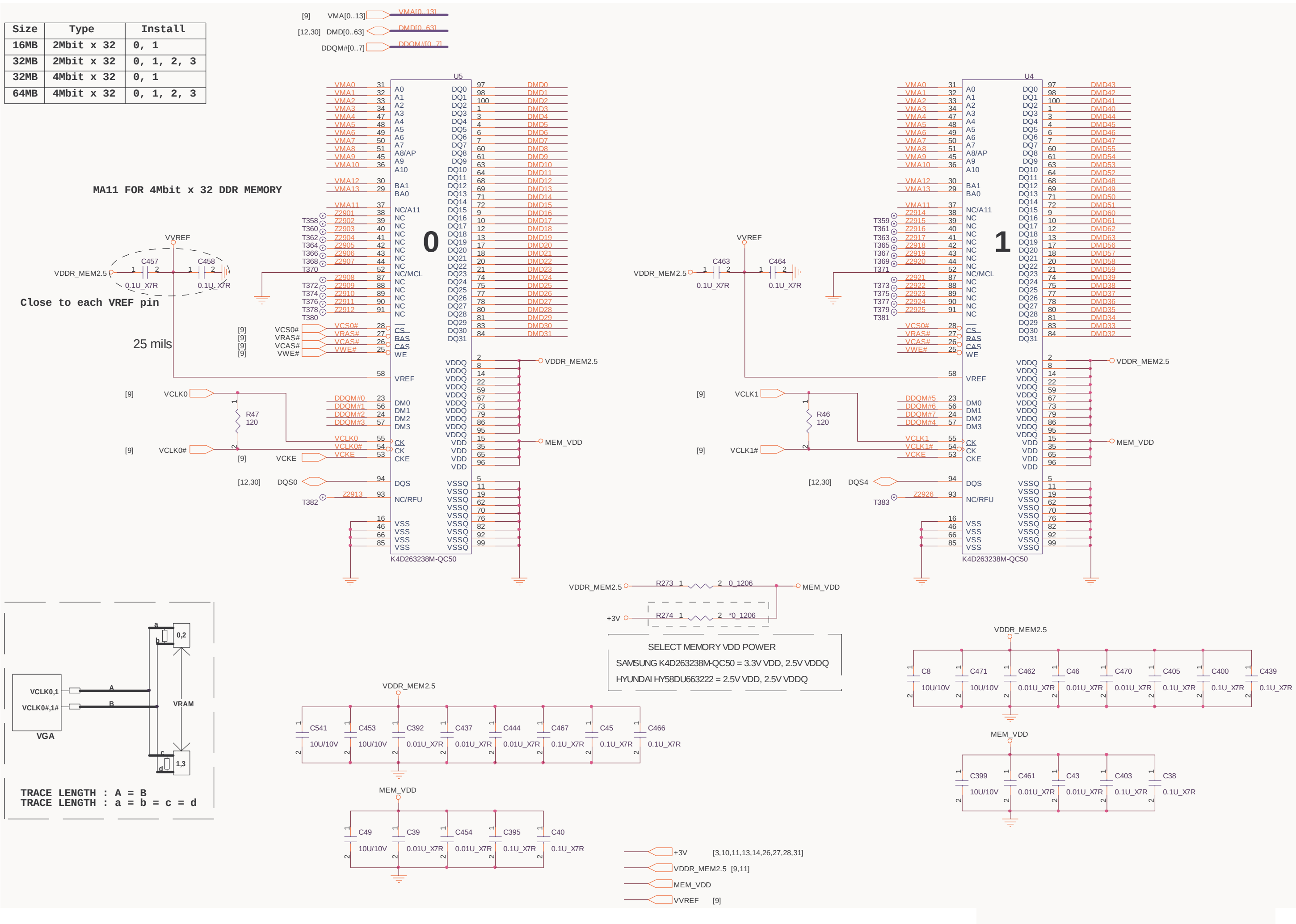


SD Pin 8	S1 Pin 7	S0 Pin 6	Spread Direction	Spread %
0	0	0	DOWN	0.6
0	0	M	DOWN	0.8
0	0	1	DOWN	1.25
0	M	0	DOWN CENTER	+0.5 , -1.5
0	M	M	DOWN	2
0	M	1	DOWN CENTER	+0.5 , -2.5
0	1	0	DOWN CENTER	+0.5 , -3
0	1	M	DOWN	5
0	1	1	POWER DOWN	-
1	0	0	CENTER	+-0.35
1	0	M	CENTER	+-0.5
1	0	1	CENTER	+-0.7
1	M	0	CENTER	+-0.8
1	M	M	CENTER	+-1.1
1	M	1	CENTER	+-1.4
1	1	0	TEST	TEST
1	1	M	CENTER	+-2.5
1	1	1	POWER DOWN	-

VRAM DDR - 1 of 2

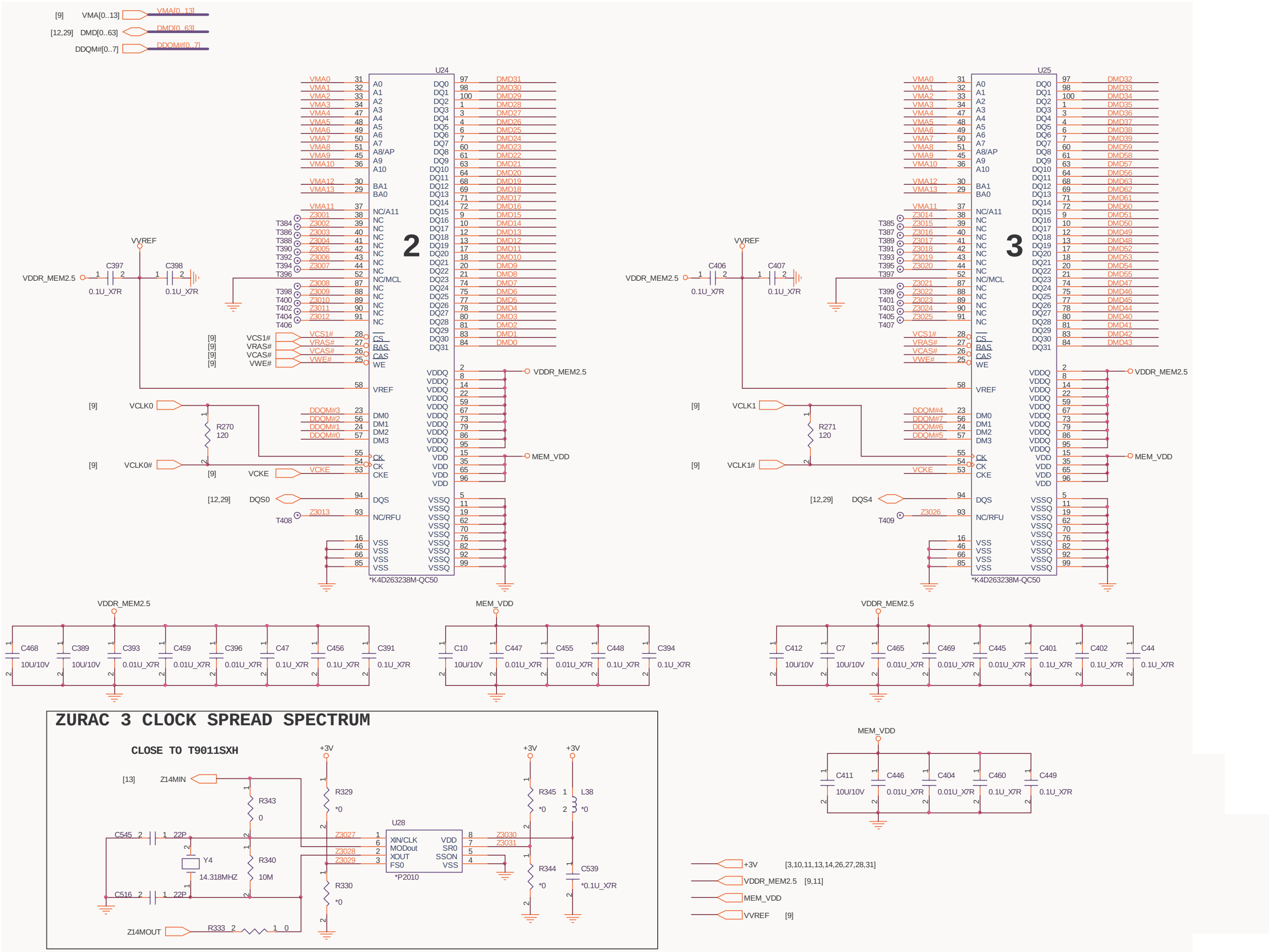
Sheet 30 of 32
VRAM DDR
1 of 2

Size	Type	Install
16MB	2Mbit x 32	0, 1
32MB	2Mbit x 32	0, 1, 2, 3
32MB	4Mbit x 32	0, 1
64MB	4Mbit x 32	0, 1, 2, 3



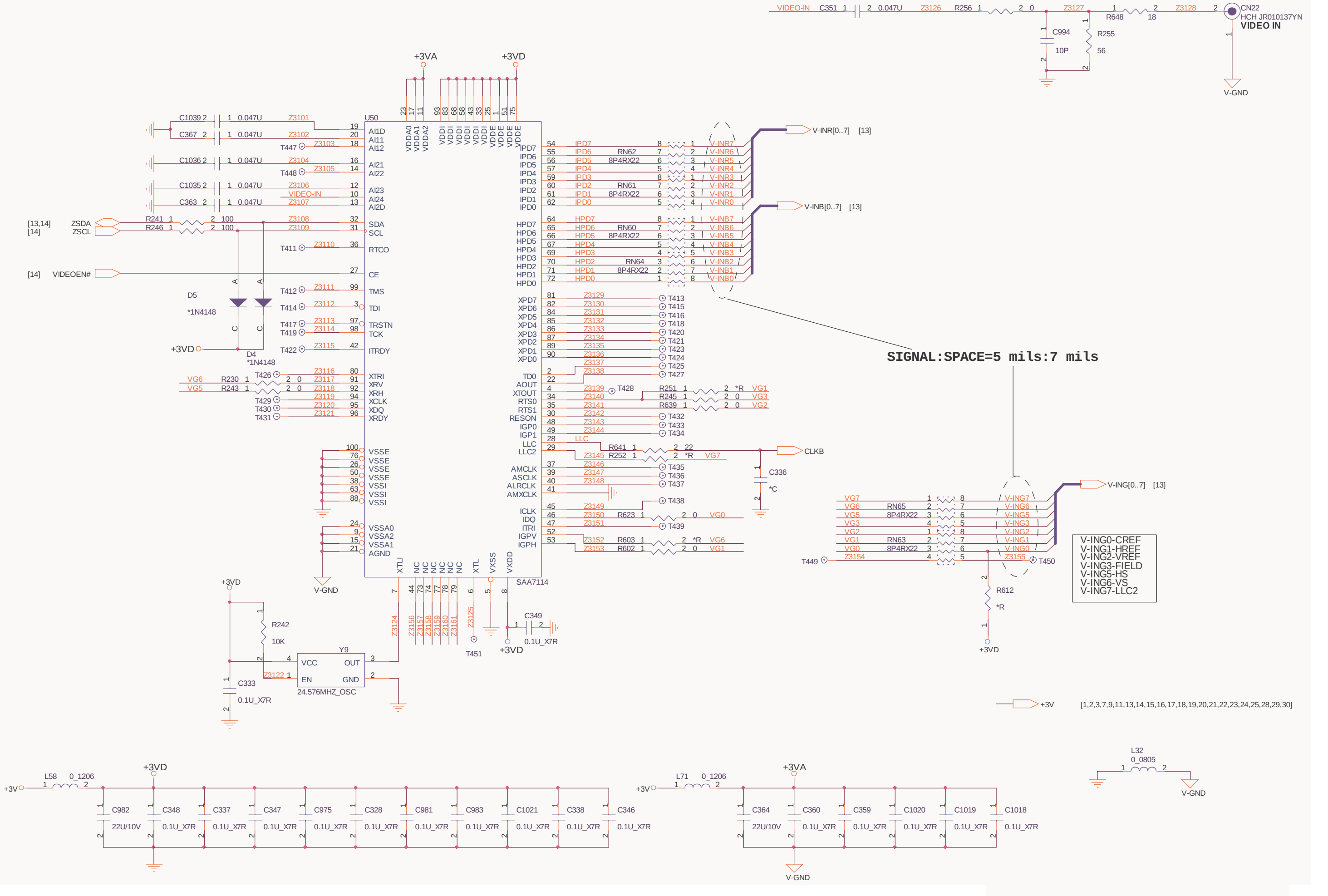
VRAM DDR - 2 of 2

Sheet 31 of 32
VRAM DDR
2 of 2



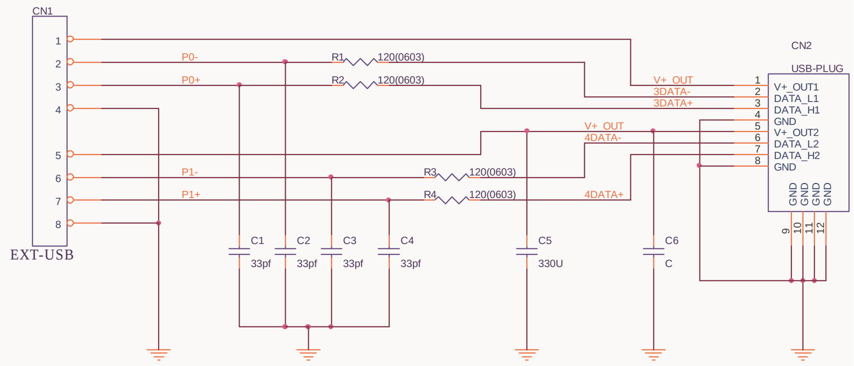
Video In

Sheet 32 of 32
Video In



External USB Board

Sheet 1 of 1
EXT USB Board



LAYOUT ¶¶§Ç©Mª`·N¨Æ¶µ

1:P0+/- trace width 9 mil ,¦Ówidth :space¬°1:1¨Ã¥]GND
©Mµ¥ªø

2:P1+/- trace width 9 mil ,¦Ówidth :space ¬°1:1¨Ã¥]GND
©Mµ¥ªø

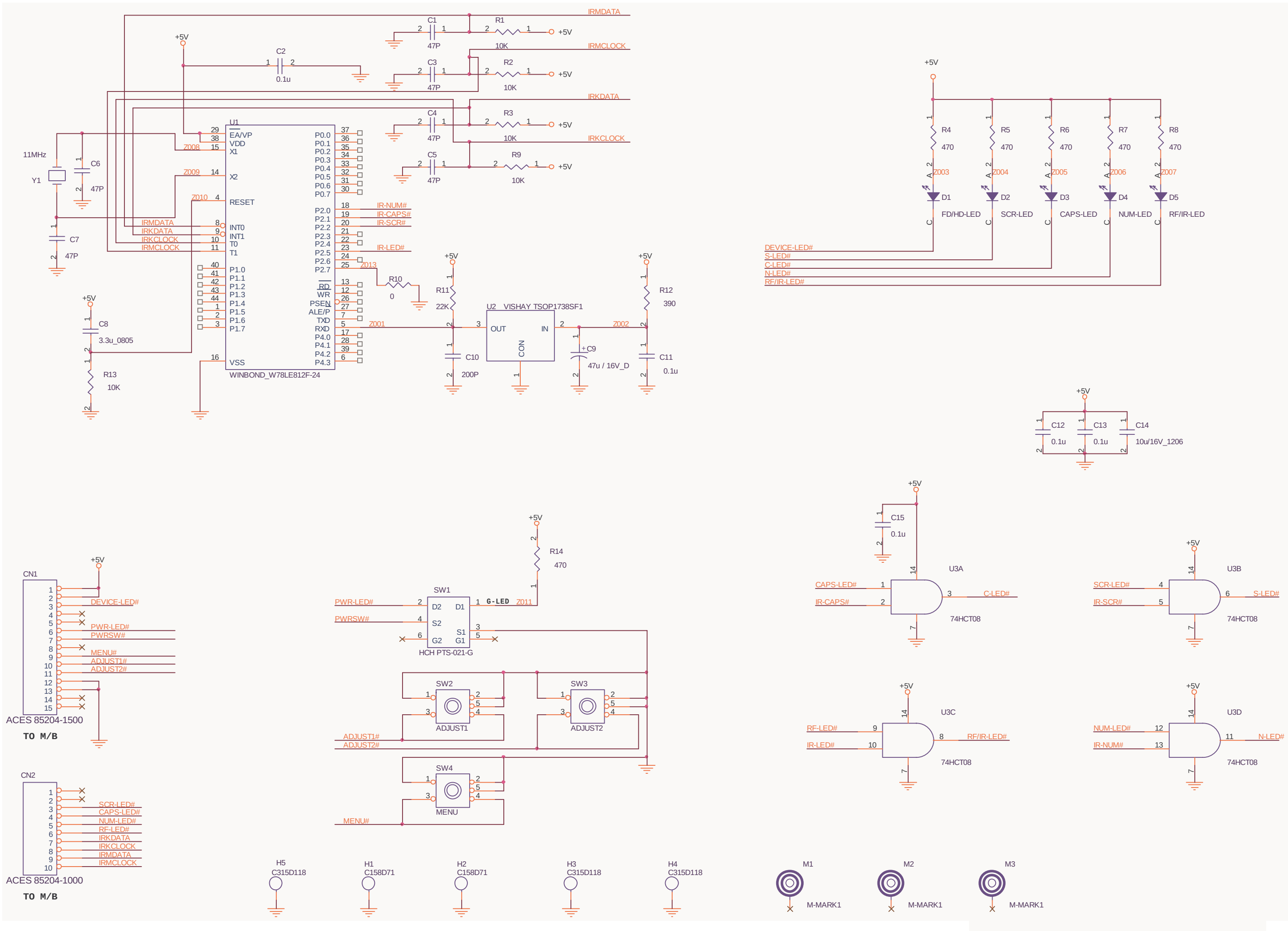
3:¨C±øPower Line trace width 60 mil ¥H¤W

4:GND ¾Q¦a®É¬°¥þ³¡,¤£¥i¥Î°ôª¬

5:LAYOUT ¥Î¨â¼hªO

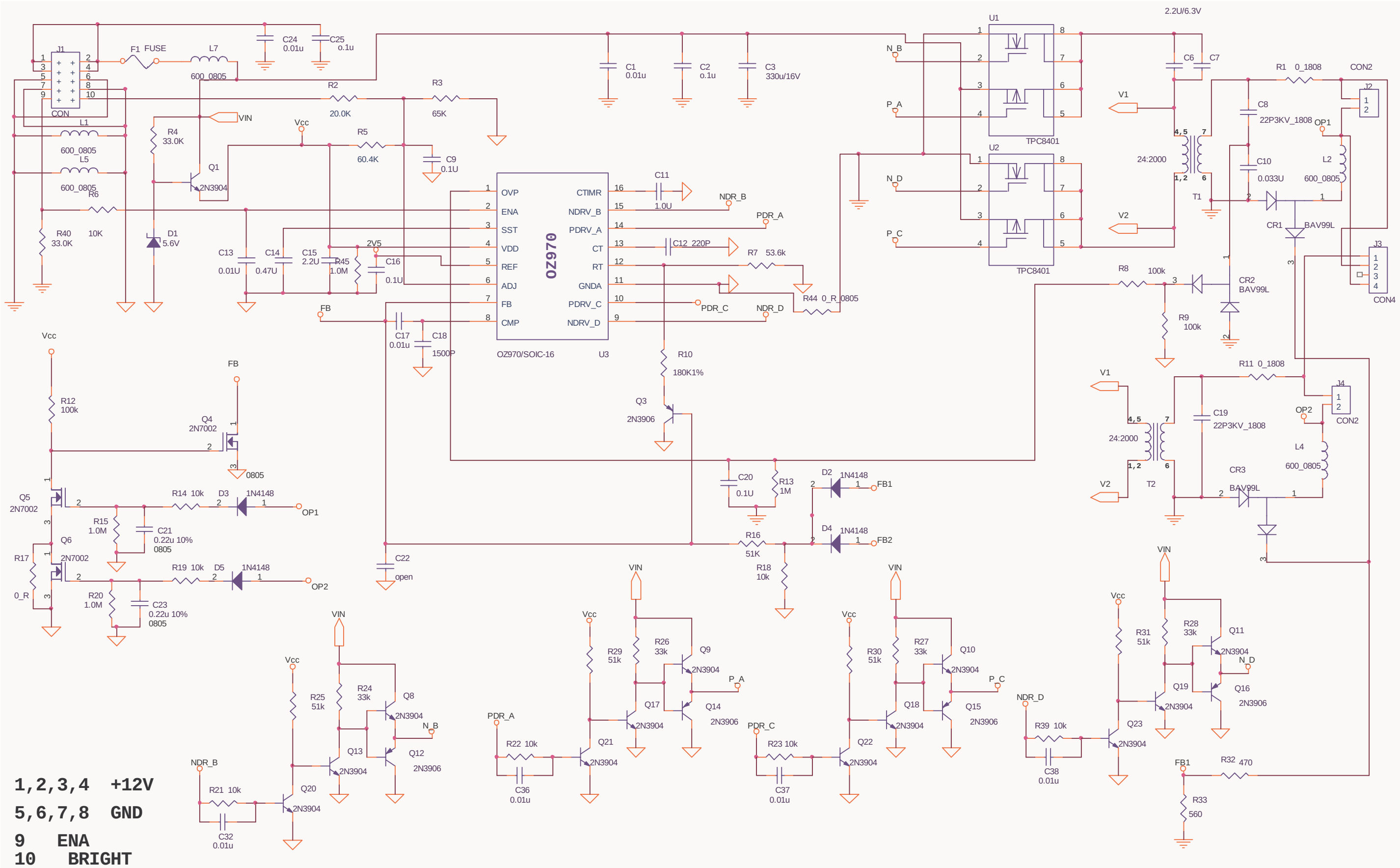
LED Board

Sheet 1 of 1
LED Board



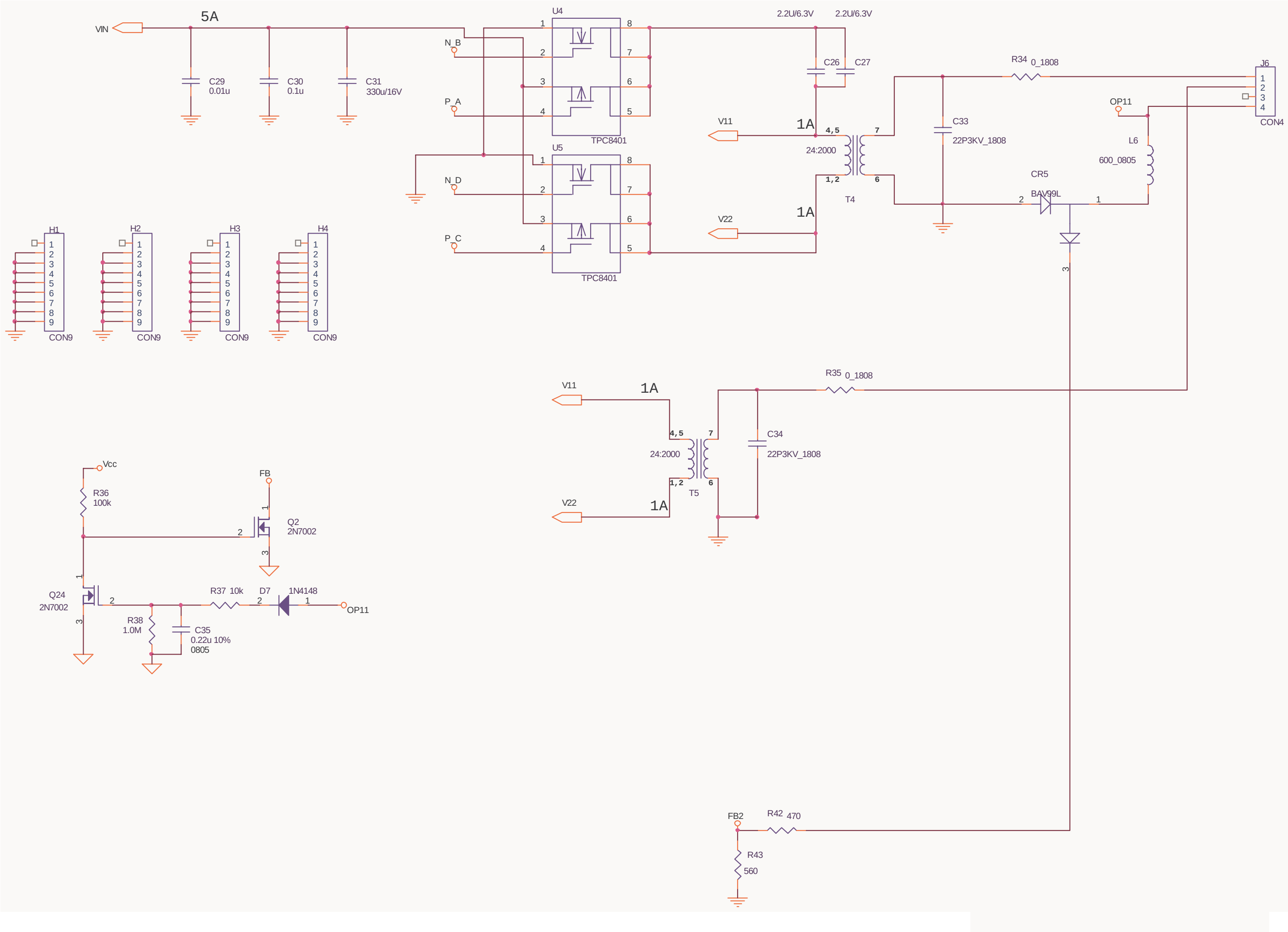
Inverter Board - Page 1 of 2

Sheet 1 of 2
Inverter Board 1 of 2



Inverter Board - Page 2 of 2

Sheet 2 of 2
Inverter Board Page 2
of 2



Appendix C:Switches

This appendix is about the system's switch settings.

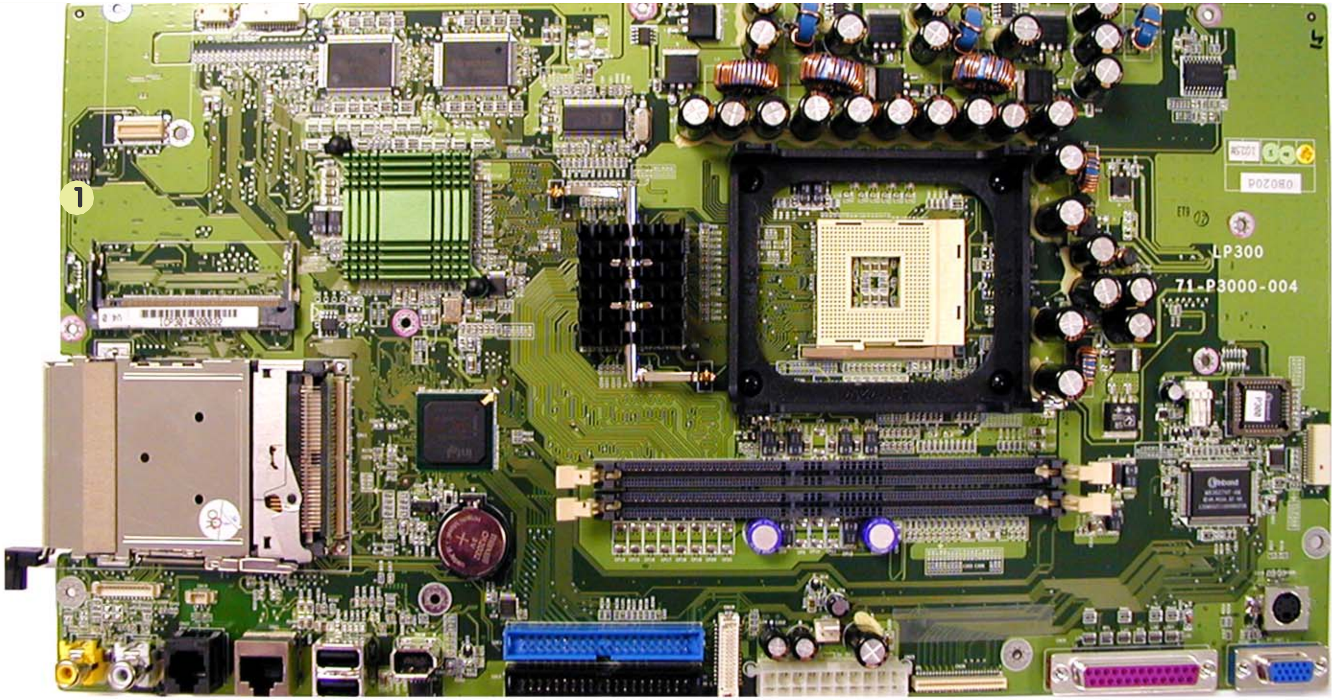


Figure 1 - 1
Mainboard Switch Location

1. SW1

Settings

Switch SW 1 LCD Type Switch			
LCD Type	**SW1-1**	**SW1-2**	**SW1-3**
LG 18"	OFF	OFF	OFF
CHI MEI 17"	OFF	OFF	ON
ACER 17"	ON	OFF	ON

Display Scaler Signal	
ZURAC 3	**SW1-4**
OLD (Date code: Before 0145)	OFF
NEW (Date code: After 0145)	ON

Appendix D:Updating the FLASH ROM BIOS

To update the FLASH ROM BIOS you must:

- Download the BIOS update from the web site.
- Unzip the files onto a bootable Floppy Disk.
- Reboot your computer from the FDD.
- Use the flash tools to update the flash BIOS.
- Restart the computer booting from the HDD.

1. Using your web browser go to **www.clevo.com.tw**
2. Choose **Download** from the menu bar at the top of the page.
3. In the **Download Driver** section select the model of your computer (**LP300 series**) and the driver type (**BIOS**).
4. Select **GO**.
5. Click on LP300xxx.zip. to download the BIOS files

Unzip the file you have just downloaded on to a bootable floppy disk.

(*The files you should see on this disk are: PLATFORM.BIN, PHLASH.EXE & LP300.XXX)*
With the bootable floppy disk containing the BIOS files in your Floppy Drive, restart the computer.

As the computer boots from the floppy disk:

1. Make sure you are not loading any memory management programs such as HIMEM by holding the **F8** key as you see the message "**Starting MS-DOS**". You will then be prompted to give "**Y**" or "**N**" responses to the programs being loaded by DOS. Choose "N" for any memory management programs.
2. You should now be at the DOS prompt: DISK A:\>
3. If you have chosen to extract the zipped files to the floppy disk (A:) type the following command at the DOS prompt:

    Phlash LP300.XXX

4. Remove the floppy disk from the drive.

Your notebook is now running normally with the updated BIOS.